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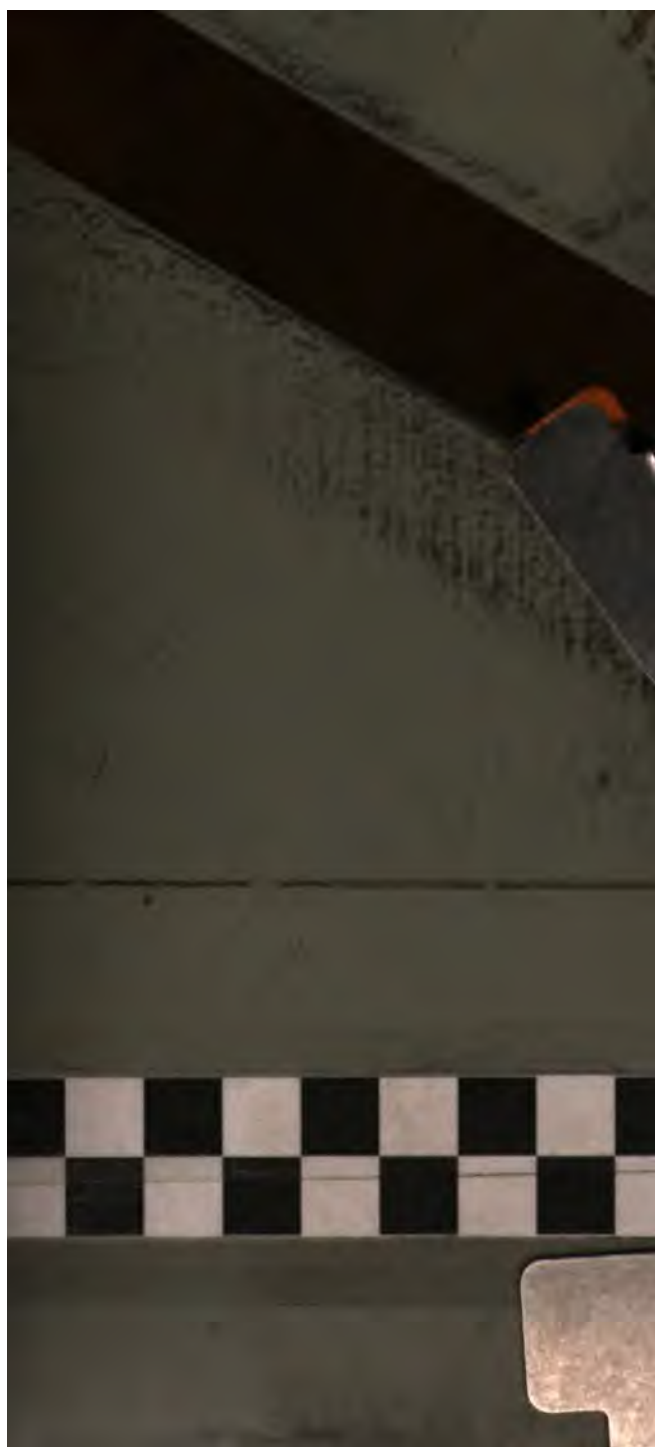
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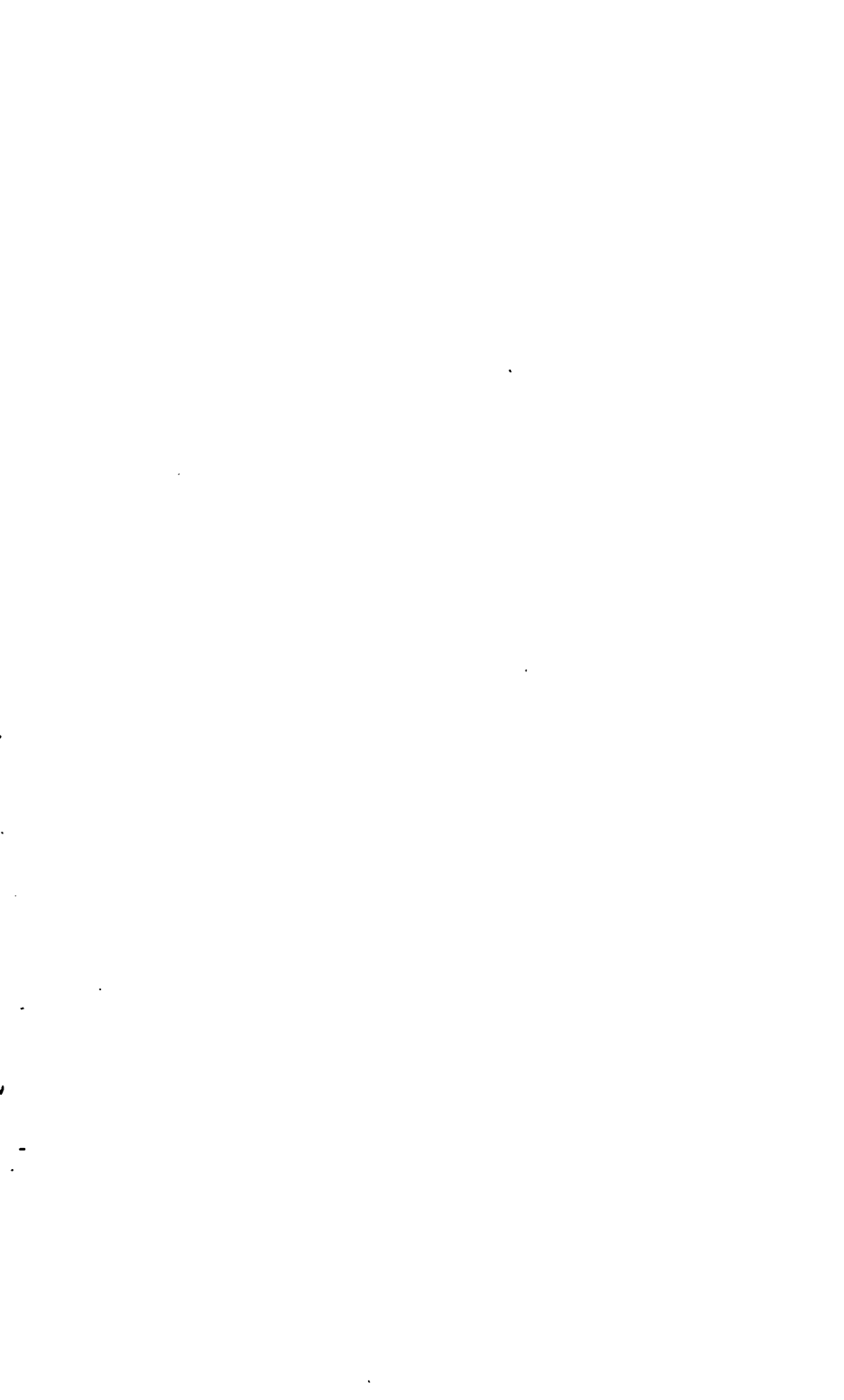


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OF THE

## ROYAL IRISH ACADEMY.

*Second Series.*

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VOLUME II.—POLITE LITERATURE AND ANTIQUITIES.

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PUBLISHED BY THE ACADEMY,

AT THE ACADEMY HOUSE, 19, DAWSON-STREET.

SOLD ALSO BY

HODGES, FIGGIS, & CO., GRAFTON-ST.

AND BY WILLIAMS & NORGATE,

LONDON:

14, Henrietta-street, Covent Garden.

EDINBURGH:

20, South Frederick-street.

1879—1888.

9342.79

LSoc 1858.30

1881, March 14 - 1888, August 21.  
List of the academy.

DUBLIN:

Printed at the University Press,

BY FOSBURY AND WELDRICK.

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PROCEEDINGS  
OF THE  
ROYAL IRISH ACADEMY.

**POLITE LITERATURE AND ANTIQUITIES.**

**VOL. II., SER. II.]**

**NOVEMBER, 1879.**

**[No. 1.]**

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Part 3.—On the Croix Gammée, or Swastika. By the RIGHT REV. CHARLES GRAVES, D.D., M.R.I.A., Lord Bishop of Limerick, &c. (With Illustrations.) [Published April, 1879.]

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PROCEEDINGS  
OF  
THE ROYAL IRISH ACADEMY.

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POLITE LITERATURE AND ANTIQUITIES.

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PAPERS READ BEFORE THE ACADEMY.

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I.—ON A PASSAGE IN THE “CONFESSIO PATRICII.” By SIR SAMUEL  
FERGUSON, LL. D., Q. C.

[Read April 28, 1879].

THE copy of the “Confessio” in the “Book of Armagh” purports to have been transcribed from an older book written by Saint Patrick with his own hand, and is justly regarded as the most authentic text of that document. In two places the scribe intimates by marginal notes that the original is uncertain. The second of these occurs at fol. 23 r. col. 1, lines 18, 19, where the difficulty appears to be caused by a word or words not understood by the transcriber, and which he presents as terminating one line and commencing another, thus :—

. . . . . ex  
agallias . . . . .

There is nothing to show whether the “ex” is a separate particle or whether it is not one of the components of a single word to be read as “exagallias.” The Bodleian text (Fell. 1), which is next in authority to the “Book of Armagh,” omits the “a,” and presents the vocable as one word, “exgallias.” Fell. 3 (also in the Bodleian) has it in two words, “ex gallicis.” These resemblances of sound, which, if Gaul were really indicated, would contribute some support to one of the theories of St. Patrick’s birth-place, have led to much canvassing of the meaning. The general disposition has been to take the words as two, and to accept the expression as having Gaul and some relation of the writer or of his brethren with that country, in view.

To reconcile this idea with the accusative form of "Gallias" it has been surmised that the terminal "ex" of the 18th and the initial "a" of the 19th line should be read together, so as, with the addition of an interposed suggested "tr," to make up the word "extra." But it would, I believe, be a singularity in Irish paleography, which has a regular contraction for "tra," if a terminal "a" were needlessly carried to the beginning of a new line, and a surmised "tr" at the end of the other left to be supplied by the reader's imagination. The text of the MS. affords no ground for the supposition; and, indeed, unless "obitus," in the passage which it is now time to present *in extenso*, could be read in the sense of its opposite "exitus," it is hard to see how any consistent meaning could be extracted, even by that process. The writer is speaking of the obligation cast upon him by the mercies of which he had been the object:—

"Oportet . . . sine reprehensione periculi notum facere donum Dei et ejus consolationem æternam sine timore fiducialiter Dei nomen ubique expandere, ut etiam post obitum meum ex agallias relinquere fratribus et filiis meis quos in Domino ego baptizavi tot milia hominum."

"It behoves me, regardless of danger, to make known the gift of God, and his everlasting consolation, without fear faithfully to spread abroad everywhere the name of God, so as also even after my death to leave [these] so many thousands of men "ex agallias" to my brethren and sons whom I have baptized in the Lord."

What, then, is

"ex  
agallias"?

Let us first examine if it be one word or more. It certainly is not "extra Gallias"; for, in addition to what is above observed, the "a" and the "gallias" are not graphically disconnected; on the contrary, they are written in clear graphic continuity. Now, there is no such word, so far as I know, as "agallias," even supposing its accusative form capable of reconciliation with the antecedent "ex." Hence arises a cogent inference that "exagallias" is one word, divided by the scribe, just as in the next line above he has divided "expandere." Being an accusative, as well as "tot milia hominum," and there being but the one verb, "relinquere," to govern both, we may infer next, with considerable confidence, that the meaning is that the writer should, after his death, leave these thousands of men to his brethren and children in the Lord as "exagallias," whatever that may be. Now, the word "exagallias" is used by an ecclesiastical author who, during part of his lifetime, was cotemporary with our Patrick, and who wrote shortly after that holy person's death, in a sense which

seems to point to its proper interpretation here. Ennodius, who was consecrated bishop of Pavia, A. D. 510, has this passage in his life of Epiphanius, his predecessor in the See:—"Ninguido aëre, et quali solent homines ad tecta confugere, Ravennam egressus est, et per omnes *Æmilie* civitates celer venit, tanquam ad sepulchri receptaculum properans, omnibus sacerdotibus in itinere positis munificus, communis, affabilis, et quasi exagellam relinquens se ipso præstantior."—(Ennod. "*Vita Epiphanii*," p. 413.)

That is:—"In snowy weather, such as wherein men rather seek the shelter of their houses, he left Ravenna, and rapidly visited the several cities of the *Æmilian* province, as if hastening to the resting-place of the tomb, to all the clergy located in his way munificent, free, affable, and, excelling himself, leaving them, as it were [his] '*exaggella*.'"

Here we observe that the "*exagalliæ*" of the Book of Armagh and the "*exagellæ*" of Ennodius are equally applied to something to be left after death; and looking to the meaning of "*exagellæ*," as we find it in Du Cange, "*trutina, seu potius quota pars quæ unicuique hæredum ex successione obvenit; legitima pars hæredis cum aliis veluti ad exagium exæquata*," find a remarkable concurrence of reasons for adopting its secondary sense of "a legacy, or distributive share of one's goods after death," as the meaning to be ascribed to it in the "*Life of Epiphanius*," and to its kindred vocable "*exagalliæ*" in the "*Confessio*" of Patrick.

Du Cange cites another example of the word in the expression, to enjoy property or to leave it "*titulo exagillario*," where he suggests "*legendum exagellario*." Perhaps, if he had had before him this passage of the "*Book of Armagh*," he would have written "*exagallario*," in analogy to the "*exgalatio*," which he also cites in the meaning of "owelty" or equality of partition amongst co-heirs (Du C. *ad verb.*)

I do not enter on the question whether the "*exagella*" of Ennodius and the "*exgalatio*" just referred to be derived from *ἐξάγων*, a balance, or from the same root which has given us the Latin "*æqualis*," and the French "*égal*"; but I fancy enough has been shown to justify the conclusion that the "*exgalliæ*" of the Bodleian copy, and the "*exagalliæ*" of the Book of Armagh, are in effect the same word, and in both cases signify legacy, bequest, inheritance.

The passage, then, would read, "so as also after my death, to leave as a legacy to my brethren and sons whom I have baptized in the Lord, these so many thousands of men"; recalling the Scripture which, having regard to what had already been said of his having been sent "*etiam usque ad ultimum terræ*," I think I may now say was probably in the mind of the writer:—"Ask of me, and I shall give thee the Heathen for an inheritance, and the uttermost ends of the earth for a possession."



II.—OBSERVATIONS UPON A LETTER FROM THE LATE JOHN FORSTER, PRESENTED TO THE ACADEMY BY THE LORD BISHOP OF KILLALOE. By the VERY REV. WILLIAM REEVES, D. D., Dean of Armagh.

[Read May 26, 1879].

THE titles of the Bishops of Clonmacnois and of Cloyne as occurring in old records are undistinguishable, inasmuch as each was designated *Cluanensis Episcopus*, from the first element in the compound names of their dioceses—Clonmacnois being *Cluain maccu Noir*, “meadow of the sons of Nos”; and Cloyne being *Cluain uamha*, “meadow of the cave”; so that in Latin documents there is no possibility, without circumstantial evidence, of determining which is intended.

Two other dioceses in Ireland have Latin names which approach very nearly to this ambiguity—so nearly as occasionally to lead external writers into some ugly historical blunders. Derry, originally *Ṑairne Calgach*, “quercetum Calgachi,” and Kildare, originally *Cill ṕairne*, “Cella querceti,” gave to their Bishops respectively, in Latin, the titles of *Derensis Episcopus* and *Darensis Episcopus*—the words *Derensis* and *Darensis* being adjectives of the same noun, *ṕairne*, only that in the case of *Ṑairne Calgach*, the word *ṕairne* being in the nominative has its first syllable short, as represented by Derry or Darry; while in the case of *Cill ṕairne*, the same noun, being in the genitive, the first syllable had a broader pronunciation, thus giving rise to the distinction of *Derensis* and *Darensis*. English writers who discuss Irish history, especially such as undertake to deal with Irish names, in editing works which involve the consideration of topography, are in great danger of falling into a trap in this as in many like instances, and therefore require more information and caution than they are generally found to possess.

I take as an example the manner in which the late John Forster, in his *Life of Swift*,<sup>1</sup> through an endeavour to find amidst a great mass of miscellaneous materials some new thing, shifts a simple transaction from the province of Leinster to that of Ulster, and lays himself open to well-merited censure.

In an autobiographical sketch which Swift commenced, and which his friend Dr. John Lyon, under his inspection, enlarged, we find the following statement:—“In the year 1694 he was admitted into Deacon's orders and Priest's orders, by Dr. William Moreton, Bishop of Kildare, who ordained him Priest at Christ Church, the 13th January that year.”<sup>2</sup> Swift had his Letters of Orders by him, and Dr. Lyon, who of all men was the most conversant with the annals of Christ Church, whereof Bishop Moreton was Dean, and was a most

<sup>1</sup> *The Life of Swift*. By John Forster. vol. i. Lond. 1875.

<sup>2</sup> *Ibid.*, p. 15.

accurate archivist, was not likely to err in so simple a matter. Dr. William Moreton was Bishop of Kildare from 1681 to 1705, when he was translated to Meath, so that his episcopate in Kildare amply covered the period of Swift's ordination, and during this time he was *Darensis Episcopus*.

Yet Forster, in a note upon the passage above quoted, observes:—"Swift knew of this insertion; but his Orders both of Dean and Priest were undoubtedly conferred by King, then Bishop of Derry. The original parchments came into the hands of Mr. Monck Mason, at whose sale I bought them many years ago, and they are still in my possession."<sup>3</sup> Further on in the work the biographer states, in the substance of the narrative:—"His Deacon's Orders date the 28th of October; his Priest's are dated the 13th January, 1694-5; and into both he was ordained by King, Bishop of Derry, afterwards Archbishop of Dublin."<sup>4</sup>

No doubt King was Bishop of Derry at this date, for he filled that See from 1690 to 1702; and no doubt he was William King also,<sup>5</sup> and thus at the required date was *Episcopus Darensis*. Strange to say, Mr. Monck Mason, the able compiler of that admirable work, the *History of St. Patrick's Cathedral*, who was at the time in possession of Swift's Letters of Orders, while correcting Sir Walter Scott as to the date of Swift's ordinations, commits the unaccountable error of saying "he was ordained into both [orders] by William King, bishop of Derry."<sup>6</sup> Forster, whose biographical obligations were, in the case of Swift, as great to Mason as they were, in the case of Goldsmith, to Prior, caught at this statement as a correction of Swift himself; and thus paid the penalty of being wise above what was written.

It happened that when the present Bishop of Killaloe was Archdeacon of Kildare, a dealer in old books and papers offered for sale a parchment document which Dr. Fitzgerald recognized as a Subscription Roll of the diocese of Kildare, and which, having been recovered, was restored to its proper depository. While in his possession, he perceived among the signatures that of Thomas Wilson, afterwards the celebrated Bishop of Sodor and Man; and further on, in his firm and unmistakeable hand, that of Jonathan Swift, as ordained by *Gulielmus Darensis Episcopus*. After the lapse of many years, namely, in 1875, Mr. Forster's book appeared, and the Bishop of Killaloe, observing the misstatements above mentioned, wrote to the author to say that, when Archdeacon of Kildare, he had himself seen Swift's subscription in his

<sup>3</sup> *Life of Swift*, note 2. I presume they are now preserved, among Mr. Forster's literary collections, in South Kensington Museum.

<sup>4</sup> *Ibid.*, p. 76.

<sup>5</sup> Shortly after his promotion to the episcopate, he preached before William III. at St. Patrick's, on which occasion his Majesty, on complimenting the preacher, said (what was with him exceptional) facetiously, "there is, after all, but little difference between me and you, for I am King William, and you are William King."

<sup>6</sup> *History of St. Patrick's Cathedral*, p. 235.

hand on the Ordination Roll of Kildare, and requested that he would look again at the Letters, being assured that he would find that the Bishop was described as *Darensis*, not *Deriensis* or *Derensis*. In a communication which I received from his lordship in March last, he says, after mentioning the foregoing particulars:—"I send you his answer. It was one of the last letters the poor fellow ever wrote. May I ask you to keep a copy for Armagh, and give the original to the Royal Irish Academy, that the evidence may be preserved when I am dead."

In accordance, therefore, with his lordship's desire, I now present the Letter in his name, and take the opportunity of recording its contents:—

"PALACE GATE HOUSE,

"KENSINGTON W., LONDON,

"11th January, 1876.

"MY LORD,

"You are undoubtedly right; and I am deeply indebted to you for having written to me.

"I fell into the very error you point out in unwisely correcting my corrector.

"I have referred to the parchments in my possession (endorsed respectively by Swift himself, 'Oct. 25, 1694, Letters of Orders for Deacon'; and 'Jan. 13, 1694, Letters of Orders for Priest'), and find that the word beyond all question is *Darensis*—*Gulielmus proodia diā Darensis Epūs*.

"The correction shall be made as soon as may be.

"I repeat my thanks, and with much respect beg you to believe me,

"My Lord Bishop,

"Most truly yours,

"JOHN FORSTER.

"THE LORD BISHOP OF KILLALOE."

III.—ON A BRONZE MEDALLION OF THE "DELIVERY OF ANTWERP IN 1577," BEING ONE OF A SERIES ENGRAVED IN "PATRIA LIBERTATI RESITUTA," AND RE-PUBLISHED BY SIR WM. STIRLING MAXWELL. By W. FRAZER, F.R.C.S.I., M.R.I.A.

[Read May 26, 1879.]

THE last contribution made by Sir Wm. Stirling Maxwell to art and history is his splendid illustrated folio work of *Antwerp Delivered in 1577: A passage from the History of the Troubles in the Netherlands*. This book was printed in Edinburgh, and fronting the title-page is an announcement of the death of Sir William at Venice on January 15, 1878, whilst his work was passing through the press. If he were still living, the materials for the present communication would have been submitted to him and placed at his disposal.

The book is illustrated with copies of borders, old initial letters, facsimiles of designs and maps, and especially with engravings after Merten de Vos and Franz Hogenberg. Now it is with the series attributed to De Vos that I wish this evening to deal. They consist of a frontispiece of portraits which, from having no artist's name affixed, and being dated in 1579, is judged to be of somewhat later execution than the series of seven designs to which it serves as an introduction. These seven plates commemorate the successful plot of Charles de Redelghem, Baron of Leiderkerch, and Civil Governor of Antwerp, Captain Pontus de Noyelles, Seigneur of Bours, and William Rouck, Receiver-General of Royal Domains in Brabant, to seize the Castle of Antwerp for the Estates, and the consequent demolition of part of that fortress, events which took place from the 1st to the 23rd of August, 1577.

The first of this series of illustrations is dated in 1578, and is signed at top MERTEN DE VOS. IN. The name of the engraver of the plates is not given, and their ascription must be doubtful. Alvin, in his Catalogue of the works of the three brothers Wierx, published in Brussels in 1866, claims them as the handiwork of these industrious and skilful artists, though he does not venture to attribute them to any one of the three brothers in particular. Again, in the *Atlas Historique Drogulin* (Leipsic, 1867), it is suggested that they proceeded from the Burin of Adriaan Collaert, and they have considerable resemblance to his workmanship. So far as the printers of the plates are concerned, they took care to be better known. There are two editions; the first issued by Peeter Baltens at Antwerp, and the second has for its printer's address "Amstelodami, Franciscus Hoeius, excud."

Merten de Vos, to whom the designs are attributed, was son of an artist, Peter de Vos. He was born at Antwerp in 1531, and was, therefore, about forty-six years of age when the attempt was made to seize the citadel. He was trained in art by his father and by Franz Floris, and afterwards studied in Italy, under Tintoret, for whom he is said to have painted the back-ground of several of his pictures. On his return to the Netherlands, he painted numerous religious pieces and portraits distinguished for their truth and spirit. He excelled in allegorical representations such as are displayed in the fancy designs

which accompany and enrich the present series of historical illustrations, and add so much to their artistic interest. He was rather prolific in his compositions, for upwards of 600 of them were engraved by the Collaerts, De Parre, Hogenberg, the brothers Wierx, the Sadeliers, Goltzius, and Galle.

Let me direct attention to the second plate of the series. Its history is, that on the first day of August, 1577, the company of Captain de Blois, Seigneur of Trealong, is chased from the citadel of Antwerp by the other three companies which formed the Walloon garrison; this action is represented in a circular medallion, and ornamented as if framed, having emblematic figures of Foresight and Constancy above the medal; broken manacles hang at the sides, and underneath are forcible Dutch verses describing and commemorating the event.

Now a few years ago a splendid bronze medallion or plaque, cast as all such medals are, fell into my possession, which accurately represents this circular medallion of De Vos. It is of the same size, and the few trifling differences between it and the engraving show that the latter was copied from this medal, and indeed is a very close copy in every respect. I was unaware of the real importance, or even historical value, of this medal, until I chanced to discover it in Sir W. S. Maxwell's book; and greater still was my astonishment to find that Sir W. Maxwell himself, who appeared to have exhausted every probable source of information, was utterly unaware of the existence of this important historical record. It is the undoubted original whence the medallion centre of the engraving commonly attributed to De Vos is derived, and is consequently one of a set of medals of which I fear the rest of the series have unfortunately perished, the only record of their existence being preserved in these plates. I am still ignorant by whom it and its lost companions were designed; and the name of the patriot artist, who probably was an eye-witness of the scenes which he depicted, must for the present remain a mystery. It is possible they were the handiwork of De Vos himself. I am willing to admit his claim to the allegorical figures and accessory emblematic ornaments displayed for a framework around the engraved medals; but the central work itself appears to me to point to other hands and different style of art.

The conclusion I have arrived at is, that the series of seven plates which commemorate the delivery of Antwerp are undoubted copies engraved from a set of medals, or rather medallion plaques, much esteemed at the time when De Vos must have delineated them, and considered these patriotic designs of sufficient historical and artistic importance to require special allegorical illustration from his hand, and a series of descriptive verses in their praise and explanation; and I have the pleasure of exhibiting to the Academy, in proof of this conclusion, the solitary example of these grand medals so far as we can ascertain, that has escaped destruction, and to claim for its as yet unknown designer the honour of having conceived and executed a series of brilliant, spirited pictures in metal, that have seldom been equalled in medallion art.

IV.—ON AN EARLY IRISH HARP. By WM. FRAZER, F.R.C.S.I., M.R.I.A.  
With an Illustration.

[Read May 26, 1879.]

THE Irish harp which I now exhibit to the Royal Irish Academy came, through chance, into my possession a few years ago. I regret it is impossible to trace its previous history beyond the statement of the person from whom I procured it, that it was purchased at a sale in some gentleman's house in the country, where it was kept as an ornament in the hall, and that he was told it had been so preserved for several years.

When Herr Sjoden, the distinguished professor of harp music, lately visited Dublin, to perform on his favourite instrument during the celebration of the "Moore Centenary," I had an opportunity of showing this harp to him, and it was from the special interest he took in it that I am induced to exhibit it this evening. He was attracted by its classic shape and the elegance of its construction, and at once directed my notice to a peculiarity in the number of its strings, which I will mention afterwards. He considered it possibly an unique example of the harp in common use about the time of Elizabeth or early in the reign of James I., that is ascribing to it at least an antiquity of 250 years. At all events it deserves notice from its state of preservation, and is a good example of the small portable variety of Irish harp, such as we would suppose a native harper to carry with him in his travels through the country from castle to cottage; and it is to the employment of instruments like this that the traditional knowledge of our ancient Irish airs must have owed their transmission from distant ages.

The striking and handsome shape of this harp is well exhibited in the accompanying woodcut from a drawing, made for me through the kindness of my friend Mr. Thomas Longfield. The instrument rises from an oblong pediment serving as a base, and which measures  $11\frac{1}{2}$  inches broad by rather more than 6 inches wide. It varies in depth from  $2\frac{1}{2}$  inches at the front to 2 inches behind, sinking gradually from the front backwards. The harp itself reaches to a further elevation of 28 inches above this pediment or base, measured to the loftiest point of its upper arm, which forms a graceful double curve. The main pillar of the instrument is 27 inches high; on its posterior surface are two sounding-holes of rather large size and of heart shape: the holes on the sound-board are protected from injury, by overstretching of the harp-string, by the simple device of a curved piece of metal wire inserted at the upper edge of each sound-hole. There are twenty-six of these holes, and on the upper arm are twenty-six keyholes, and a similar number of metal pins or pegs for straining the wires and keeping them in tension: the keys themselves are wanting. The front pillar, which presents a curve of pleasing out-

line, is carved in its centre in rather rude and primitive pattern, but it ends in the claw of an animal, which, from the spirited mode of its representation, forms a suitable termination to the pillar. In the *Catalogue of Musical Instruments*, published by the South Kensington Museum, and edited by Carl Engel, there is an engraving of an early harp, taken from the manuscript of the monastery of St. Blasius, in which the front pillar of the harp is terminated by a claw, very similar to that now figured, which attaches it to the lower part of the instrument.



The number of strings in this harp, shown by the key-holes, by the straining-pegs, and by the holes in the sound-board, was twenty-six only. According to Sir W. Ferguson the Irish harp was "usually strung with thirty strings, being a compass from C to D in alt, com-

prising the tones included between the highest pitch of the female voice and the lowest of the male, being the natural limits within which to construct the scale of an instrument intended to accompany vocal performances."

The highly ornamented and celebrated harp which is preserved in the museum of Trinity College, and usually called the harp of Brian Bora, but which has been stripped by modern investigators of its romantic antiquity, and is now considered to have belonged to some distinguished person of the tribe of the O'Neils, whose armorial bearings it displays, was supposed, through some error, to have only twenty-eight strings. Dr. George Petrie, in his examination of it, found there were thirty tuning pins and corresponding string-holes, which would appear to be the average number. This harp is well known for its beautiful decorative carving; it measures thirty-two inches in height.

The Gardyn harp, described in popular belief as the harp of Mary, Queen of Scots, is also described by Petrie as having thirty strings; and, from his scrupulous accuracy, this is probably correct. However, in a recently published Cyclopædia on musical matters, I find that twenty-eight strings are mentioned as being the exact number.

This far more humble harp which I here endeavour to describe belongs to a different class of instrument. It is plain and simple in its construction, though possessing great beauty of form and gracefulness. It was not intended for great ecclesiastics or the hands of wealthy nobles, but for the daily use of the wandering bard. What I have said of its construction is simple matter of description; still there appears to have once been some additional figure or ornament at the upper part of the front pillar; what this might be is mere conjecture. Upon the Irish silver coins of the first James the harp is represented with the ornament of a bird's head, and it is allowable for us to supply a similar device where it seems deficient; or we may prefer a more graceful female head, such as figures on the copper Irish coinage of Charles II., and upon the succeeding copper coinages of our kings; it is equally probable and at least better looking than the head of the bird, for an ornamental termination to the pillar.



V.—ON A BRONZE BELL AND SCULPTURED HEAD OF STONE, AND OTHER ANTIQUITIES FOUND IN THE CHURCH OF KNOCKATEMPUL, CO. WICKLOW. Described by W. FRAZER, F.R.C.S.I., M.R.I.A. With an Illustration.

[Read May 26, 1879].

MR. HENRY KEOGH, of Roundwood House, Co. Wicklow, made some time ago a careful exploration of the old ruined church of Knockatempul, and by his kind permission I am enabled to lay before the Academy the result of his discoveries there, which are of considerable interest. This church is situated in the parish of Newcastle, Co. Wicklow, near Roundwood, and in the vicinity of the Vartry Water Reservoir. There appear to be no reliable records of its foundation or destruction, which is so complete that its walls were level to the ground, and what remained of it required to be cleared out of clay and rubbish for two or three feet before the flooring was reached. It must have been a large building, 50 feet long and 26 feet wide, with two side aisles 9 feet wide in the clear, and 26 feet in length, which from the plan may have been of later erection than the church itself. It was disposed east and west, and the door, which was on the south side, was 4 feet in width. The aisles as well as the central portion of the church were paved with large flat stones, and in one of the aisles to the northward was what Mr. Keogh conjectures to be the remains of a stone altar situated in the east of the building; but he could find no trace of an altar in the body of the church itself. Underneath the pavement of both the aisles he found rude stone enclosures for sepulchres, composed of flagstones containing human remains, and in one of them was a rough stone hammer which I have not seen.

The church walls were composed of undressed field stones imbedded in hard mortar, a few of the stones having their corners roughly hammered; the doors and windows appear to have been dressed with a yellowish freestone, similar to the material in which the head now exhibited is carved. Mr. Keogh fancied that the freestone work might possibly be later than the original building, but this seems doubtful.

The large square-shaped bronze bell, which is also shown, measures 12 inches high, and 8 inches across. It was found at the east end of the church, about two feet under the surface, near the position the altar would occupy. It had a handle, which was broken off by the workmen in excavating it, and which I understand is forthcoming. They also damaged one part of the top of the bell with a pickaxe. Mr. Keogh has polished a corner of it, and it consists of fine bronze made in two portions, the halves being rivetted together.

The head carved in freestone is a work of good execution, and is very interesting from the disposition of the hair and tonsure. The

front hair hangs down in quantity over the forehead, cut straight across; behind, it hangs in ample ringlets on the neck; and the tonsure would appear to have been a narrow strip along the vertex, running from before backwards, not above half an inch in width. It was found at the east end of the church, and to the left (north) of the situation for an altar. In front of this altar site two bodies were discovered with their heads to the south and limbs northwards, their skulls touching, interred about four feet under the pavement, and covered over with a layer of lime.



I am indebted to Mr. Thomas Longfield for the above drawing of the stone head.

Mixed with the clay and rubbish that lay over the pavement of the church floor, were several portions of human skeletons confusedly interred; with them was some broken pottery, now in the Academy's Museum, and low down on the floor were irregular heaps of charcoal scattered about. On the skeleton of one man, whose bones were of large size, lay a stone of about 2 cwt.; his body and limbs appeared doubled

up, and about the vicinity of the thigh-bone two coins were discovered, one of them an English penny of Henry III., mint mark "Robert on Canterbury"; the other a Scottish penny of Alexander II., with long double cross, *IOHAN ON*—, probably a Perth coin, not rare, and belonging to his last coinage.

The other finds shown to the Academy were:—

No. 1. A portion of a glass patera, much irised by oxidation.

No. 2. A button core of mica schist.

No. 3. A fragment of copper with some wood, evidently part of the binding of a book.

No. 4. A polished elongated bead of bone or ivory.

No. 5. The bowl of a bronze spoon.

No. 6. A bronze clasp or hook of remarkable construction, of fish-hook shape, with a bronze tongue forming a spring.

VI.—ON A PASSAGE IN THE "CONFESSIO PATRICII." (No. II.) By  
SIR SAMUEL FERGUSON, LL.D., Q.C.

[Read June 23, 1879.]

PROCEEDING with the passage in which I ventured, at a recent Meeting of the Academy, to assign a meaning to "*exagallias*," the writer of the "*Confessio*," as we find it in the "*Book of Armagh*," goes on as follows:—"Et non eram dignus neque talis ut hoc dominus servulo suo concederet post erumnas et tantas moles post captivitatem post annos multos in gentem illam tantam gratiam mihi donaret quod Ego aliquando in juventute mea nunquam speravi neque cogitavi sed postquam hiberione deveneram Cotidie itaque pecora pascēbam et frequens in die orabam magis et magis accedebat timor dei," &c.

Here are two sentences, one conversant with the writer's state before his captivity, the other contrasting with that, his condition after his arrival in Ireland (*hiberio*).

All the translators so accept them; but all, so far as I know, adopt the word "*cogitavi*" as the end of the one, and the word "*sed*" as the beginning of the other. In this division, the sense of the whole would run thus:—"Neither was I worthy, nor such a one as that the Lord should vouchsafe this to his poor servitor, after hardships and burthens so great, after captivity, after many years [spent] in that nation, should bestow upon me such a grace as I erewhile in my youth never hoped for nor thought of. But after I had come into Ireland [as] daily "*itaque*," I fed my flocks and often in the day prayed, the fear of God did more and more come near to me," &c. I have left the "*itaque*" of the original untranslated; for, whether it be rendered "*therefore*," or "*and so*," or "*however*," the sequence of predication, in this division of the paragraph, will be equally embarrassed, and an expression proper to the introduction of a train of thought will appear needlessly intruded into the continuation of it. Taking "*itaque*" in the sense of an initiatory particle, as it is commonly used, it certainly imports a commencement of the sentence at "*Cotidie*," which would leave "*sed postquam in hiberione deveneram*" to form part of the preceding sentence. The form of the text offers a considerable inducement to this division, instead of that adopted by the translators. The scribe has used no punctuation; but he frequently, though not always, distinguishes the commencements of sentences by the use of capital initials; and "*Cotidie*" here is so written. In some instances, indeed, he employs the capital out of place, and the beginnings of many sentences he leaves undistinguished; but when he does employ the capital, it is so generally where it ought to be, that a presumption arises that it was not put here without reason. He also sometimes indicates sentence-division by a wider space between the terminal and initial words; and, in this particular case, he has left a noticeable vacancy between "*deveneram*" and "*Cotidie*."

The older Bodleian text (Fell. 1) gives no assistance in the way either of punctuation, distinguishing capitals, or of discriminatory spacing; but instead of "itaque" it has "igitur," the equivalent of "itaque" in its initiatory force, and affords, though after a great lapse of time, what partakes of the character of *contemporanea expositio*, in aid of the division after "deveneram."

The later Bodleian MSS. (Fell. 3) offer the assistance of a semi-comma, and go to support the foregoing conclusions, by placing it after "deveneram."

Taking the division there, and giving "itaque" its proper force, the second sentence would read:—" [As] daily, however, I fed my flocks, and often in the day prayed, the fear of God," &c. But the acceptance of this solution of the first difficulty necessitates the giving a different meaning to "sed" in the antecedent matter. "Sed" is used in Latin only in its adversative sense. It never, so far as I know, has the meaning of *præter* or *nisi*. In our own language, however, its equivalent "but" has a wider use. It signifies also "except," uniting the forces of the Latin "sed" and "nisi" and "præter." An opinion exists that the English "but," in each of these meanings, is a separate word and of independent origin. We have, however, an example of the same forces co-existing in the Irish *acht*, which regularly means "but" adversatively, as well as "save," "unless," or "except." No one has thought of providing two roots for *acht*, as has been done, or supposed to be done, for the English "but," and *acht* may be taken for the purposes of this inquiry, apart from any question of etymology, as a Celtic particle, in translating which into Latin, in the case of one not well skilled in the latter language, the word "sed" would probably suggest itself as a full equivalent to it in either of its meanings. Treating the text on this hypothesis, and remembering the writer's apology for the rudeness of his endeavours to express his native speech in an alien tongue—"nam lingua et loquela nostra translata est in linguam alienam, sicut facile potest probari ex alive [ex saliva] scripturæ meæ"—we find a rendering of the first sentence of the paragraph equally self-contained and apposite with that for which it is submitted as a substitute, while we leave the general meaning of the passage at large substantially unaltered, and the second sentence freed from all difficulty occasioned by its troublesome "itaque," viz.:—"Neither was I worthy nor such a one as that . . . the Lord should bestow upon me such a grace as I, at one time in my youth, never hoped for or thought of, except after I had come into Ireland. Daily, however, [as] I fed my flocks, and often in the day, prayed, the fear of God did more and more come near to me," &c.

If this be so, we have grounds for surmising that at least one vocal of the native speech, out of which St. Patrick constructed those Latin sentences, belonged to some Celtic dialect not unlikely to be found among the Britons of Strathclyde, and for other traces of which we shall not be altogether unrewarded in a further examination of the "Confessio."

VII.—ON INSCRIBED STONES, COUNTY MAYO. By G. HENRY KINAHAN,  
M.R.I.A., &c. (With Illustrations.)

[Read June 9, 1873.]

THE inscribed markings on the stones which form the subject of this communication evidently belong to one of the simpler divisions of a class to which attention has been already directed by various writers.

On February 13, 1860, the Right Rev. Charles Graves, D.D., Lord Bishop of Limerick, read a Paper before the Academy, on stones with somewhat similar inscriptions, which had been discovered by Mr. Richard Hitchcock, the late Earl of Dunraven, Mr. Jermyn, the late Dr. Petrie, himself, and others [*Transactions*, Royal Irish Academy, vol. xxiv. (Antiquities), p. 421]. Subsequently the late Mr. G. V. Du Noyer, and Dr. Conwell, figured and described the markings on the stones in the carns of Slieve-na-Cailliagh, Co. Meath.

The late Mr. G. Tate, in 1853 and 1864, communicated to the Berwickshire Naturalists' Club two Papers on similar sculpturings in

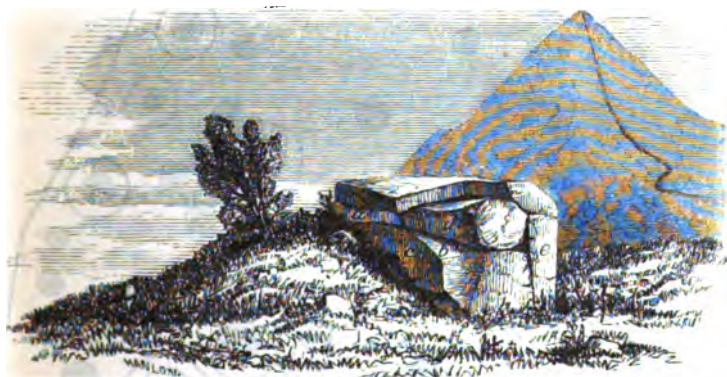


Fig. 1.

Northumberland and the Eastern Borders, which appear in the Proceedings of the Club, with illustrations. In Stuart's "*Sculptured Stones of Scotland*," vol. 1, plate cxxiii., and vol. 2, plate cxix., are given drawings of markings of the same class. The late Sir James Simpson, Bart., M.D., published in 1867 his book on "*Archaic Sculpturings of Cups, Circles, &c., upon Stones and Rocks in Scotland, England, and other Countries*." And in 1869 was published by direction of the late Duke of Northumberland, "*Incised Markings on Stone found in the Co. of Northumberland, Argyllshire, and other places*," which magnificently illustrated work deals entirely with inscriptions belonging to this particular kind.

The inscribed stones now to be mentioned were found four and

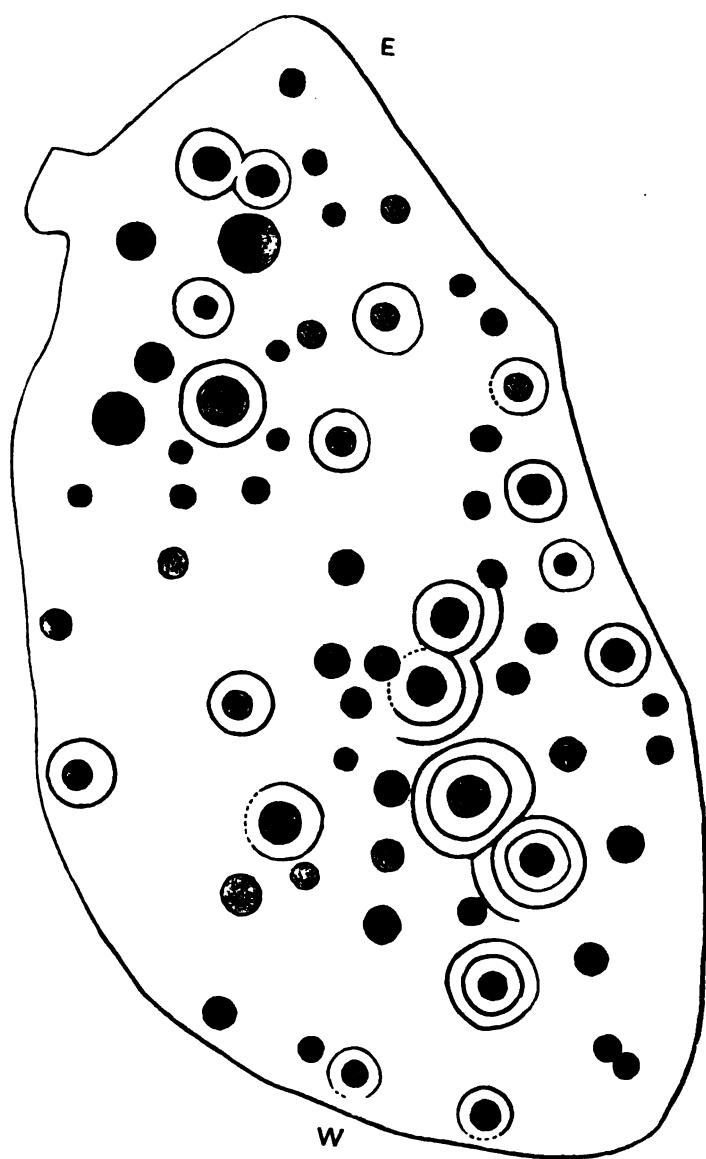


Fig. 2.

a-half miles E.S.E. from the summit of Croagh Patrick, Co. Mayo, between the old and the new roads from Westport to Leenane, a little south of Brackloon Wood, and close to the site of the ancient road called Togher Patrick. The pile or monument is called on the Ordnance maps "St. Patrick's Chair," and the markings "St. Patrick's knee marks." These were discovered while I was working in that part of the country on the Geological Survey, with my colleague Mr. R. G. Symes, who assisted in making the rubbings from them on linen, and who subsequently brought them before the notice of the British Association, at its Meeting in Edinburgh, in 1871.

"St. Patrick's Chair" (Fig. 1) consists of a heap of stones. A large flattish one covers most of the surface of the pile: of the stones under it, some are lying flat, while others are on edge or end, but all form a solid mass which might easily be mistaken for a natural heap. The markings occur on several of the stones, and consist, for the most part, of variously-sized cup-shaped hollows, in places combined with circles, or parts of circles.

Fig. 2 is a copy, on the scale of one inch to a foot, of a tracing which was made directly from the markings on the top stone.

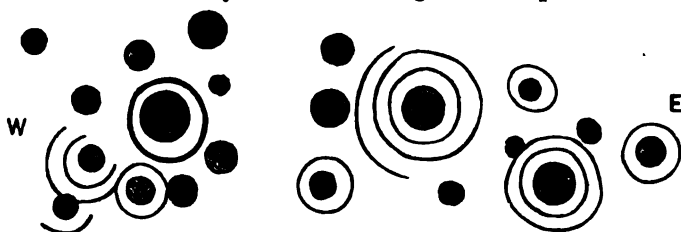


Fig. 3.

Fig. 3 is a copy of the tracing from the south flag marked *a* on sketch (Fig. 1).

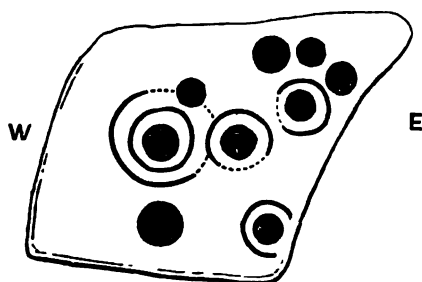


Fig. 4.

Fig. 4 is a copy of the rubbing taken from the bottom of the seat-like place, "The Chair," to the south-east of the pile, marked *b* on sketch.



Fig. 5 is a copy of the rubbing showing the principal marks cut on the surface of the south-east flag, *c* on sketch. One of these last inscriptions is peculiar, and of a different type from any of the others on the monument.

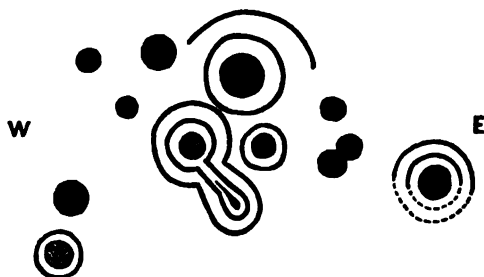


Fig. 5.

Besides the inscriptions figured, there were a few more scattered about on the rest of the surface of the south-east flag *c*, and others on the slab north of the chair, *d* on sketch, and on the upright stone marked *e* on sketch. These are the principal carvings, but scattered cups and circles can be found on all the stones that look east, south, or west; while on those looking north none were observed.

On examination of the Figures it will be seen that the inscriptions are essentially of two types, cups and circles, there being only one exception to the rule; that in no place are the circles and cups combined, or joined by straight, or nearly straight, lines, as is sometimes the case in other examples of such sculpturings, and that the markings on "St. Patrick's Chair" are very similar to the inscriptions on the upright terminal stone on the south side of the passage in the great carn of Lough-Crew, figured in Dr. Conwell's Paper, "On the Cemetery of Taillten."\* To me it seems possible that these characters may be intended for rude maps of the stars, the cups and associated circles representing the different magnitudes of the stars. However, against such a supposition it must be pointed out that in none of the plates will be found a figure like the Great Bear, a group of stars that would scarcely have been omitted from a representation of the constellations.

It would seem that the stones of which "St. Patrick's Chair" is composed were not engraved, or carved, until after they were put together. It is impossible to say whether the structure was ever covered with earth, as the adjoining land is in cultivation, and has been so for many years, and it may possibly have been once in the centre of a carn or tuaim, the stones or earth of which have been removed; this, however, is quite conjectural.

\* *Proceedings*, vol. i., Ser. II., Polite Literature and Antiquities, p. 96, Fig. 6.

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Part 2.—On a New Genus and Species of Sponge. By DR. E. P. WRIGHT. (Plate I.) [In the Press.]

[For continuation of List of Publications, see page iii. of this Cover.]

In connexion with engraved stones, it may be interesting to point out that, on the rocks adjoining some of the villages of West Galway, but especially near Mannin Bay, there are rude sketches made by the young natives, generally representing ships and boats, or the setting sun; the latter being very like one of the sketches taken by the late Mr. G. V. Du Noyer of a figure on one of the stones near the site of the eastern cairn of Slieve-na-Cailliagh, county of Meath.

In connexion with "St. Patrick's Chair," it may be mentioned that Togher Patrick, with which it is associated, can be traced from the summit of Croagh Patrick, by Aughagower, through the Co. Mayo to, and beyond, the village of Balla. Adjoining this old road, or on the heights near it, there are standing stones (*gallauns* or *laghts*), many of which are locally called Clogh Patrick. Some of these were visited by myself, and others by Mr. Symes; but on none of them did we observe any markings. These gallauns were evidently placed as signposts to direct travellers along the road: similar stones are found along the course of the old road from Kylemore Lake, Co. Galway, to the ruins of the ancient settlement at the S. E. end of Cleggan Bay; and even at the present day, in the mountainous portions of Cork, Kerry, and Galway, I have found that wild mountainous paths are similarly marked out to direct the traveller when crossing flooded lands, morasses, or the like.

In Moher Lough, which is one mile south of "St. Patrick's Chair," there is an island which from the shore seems to be a crannog, but we were unable to visit it, not having a boat.

In the glen, two miles S. W. of the lake, there seems to have been, at one time, a considerable settlement, as the ruins of numerous lisses or clay forts occur there, none of which, curiously enough, except one (*Lisaphuca*), are marked on the Ordnance maps.

VIII.—ON A FRAGMENT OF AN ANTE-HIERONYMIAN VERSION OF THE GOSPELS, in the Library of Trinity College, Dublin. By J. K. INGRAM, LL.D., Fellow and Librarian of Trinity College.

[Read, January 26th, 1880.]

IN a Paper read before this Academy on the 25th of January, 1847, and afterwards published in the *Proceedings* (vol. iii. p. 374), the late Rev. J. H. Todd, D.D., gave an account of a fragment of an ancient purple vellum manuscript of the Gospels in Latin, which he had purchased in Dublin some years before.

The fragment was a single leaf containing a portion of the 13th chapter of the Gospel according to St. Matthew. Dr. Todd laid before the Academy a Table containing the text of the fragment, with those of the same passage in the Codex Vercellensis and the Codex Veronensis, as printed in Bianchini, and also the corresponding text of the Vulgate. It thus appeared that the fragment was part of an ante-Hieronymian version of the Gospels, differing in some of its readings from one or other, or from both, of the above-named codices. Dr. Todd was of opinion, from the forms of the letters and other indications in the Manuscript, that it was written in the fourth, or the early part of the fifth century.

In the *Academy* of the 1st of March, 1879, appeared a letter by Mr. T. Graves Law, stating that the fragment in question was a missing leaf of the Codex Palatinus, in the Imperial Library at Vienna, which was edited by Tischendorf in 1847. The writer added that, to the best of his knowledge, the leaf was no longer to be found, he having been unable to obtain any information regarding it at the Library of Trinity College, Dublin, where, from Mr. Westwood's account of it, in his *Palæographia Sacra Pictoria* (1843-1845), it would seem to have been preserved.

I do not remember to have read this letter in the *Academy* when it appeared, though it is possible I may have done so. But I was familiar with Dr. Todd's Paper in our *Proceedings*, and had a lively recollection of his account of the leaf. Accordingly, I had not been long Librarian of Trinity College when I inquired about it, and learnt that Mr. Law was quite right in saying that it was not to be found. I was informed that, when a gentleman—presumably Mr. Law—had written respecting it in the time of the late Librarian, the answer had been returned that it was not forthcoming, and that it was not known what had become of it. On this, I represented to the Assistant Librarian, Mr. Thomas French, the importance of recovering it, if possible. Mr. French's zeal and energy in matters of this kind are known to many members of the Academy. He instituted a careful search, and found the missing leaf in a part of the Library, where it would not naturally be looked for, and where it had probably been

deposited by Dr. Todd until he should have chosen a definitive place for it amongst the other manuscripts on the shelves.

I need not say with what interest the leaf, when found, was examined; and the result of the examination is to establish the correctness of Mr. Law's statement that it is a fragment of the Codex Palatinus. That gentleman appears never to have seen the leaf, but formed his conclusion from a comparison of the descriptions of it given by Dr. Todd and Mr. Westwood with that of the Codex Palatinus given by Tischendorf. On a comparison of the leaf itself with Tischendorf's account of the codex, the truth is at once evident—they are found to agree in every, the most minute, particular. The preceding leaf of the codex ends with the words which in the text of the Gospel come immediately before those with which the Fragment commences. The half-leaf of the codex following the lost leaf has also disappeared, but the blank portion will be exactly filled by the portion of text intervening between the close of the Dublin fragment and the contents of the remaining half-leaf. In addition to the other points of correspondence, which I need not give in detail, as they are mentioned by Todd and Westwood, I may notice a circumstance which seems to have escaped the observation of both those writers. The leaf presents on the top, at one side, part of the word "*Secundum*," and, at the other, part of the word "*Mattheum*," and the same heading is found in the codex also. The Rev. T. K. Abbott, Professor of Hebrew in the University of Dublin, will shortly publish a new edition of the celebrated Codex Rescriptus of St. Matthew's Gospel, commonly known as Z, preserved in the Library of Trinity College, with another Palimpsest in the same collection, and he will include in the volume a lithographed copy of the text of the leaf of the Codex Palatinus.

The date assigned to the leaf by Dr. Todd is confirmed by the judgment of Tischendorf, who, in his edition of the codex, pronounces the latter to belong to the fourth or fifth century. Tischendorf was not aware of the existence of the Dublin fragment, though, after the publication of his work, Mr. Law informed him of it. Neither Dr. Todd, when writing his Paper, nor Mr. Westwood (to whom Dr. Todd communicated the leaf) could have identified it as belonging to the Codex Palatinus, that codex not being published when they wrote.

It remains a mystery how this fragment was detached from the codex to which it belonged. Nothing is known as to the way in which the codex was acquired by the Library at Vienna: it was not there before the year 1800, and appears to have been first mentioned as being there in 1829 by Kopitar, the eminent Sclavonian scholar, who was custodian of the Library. Whether the leaf came from Vienna to Ireland, or the codex went from Ireland to Vienna, we have no means of determining.

I have thought it right that the recovery of this valuable fragment, and the verification of its origin, should be first publicly made known in this Academy, where Dr. Todd had previously described it.



IX.—ON A CONE OF USER-HA, in the Museum of Trinity College, Dublin. By ALEXANDER MACALISTER, M.D., Professor of Anatomy, University of Dublin.

[Read April 12th, 1880.]

Among the very few genuine Egyptian remains in the Museum of Trinity College, I find a red clay cone of the usual pattern, whose inscription I desire to place on record. As to the circumstances under which it came into the Museum I know nothing, as there is no record of its source or presentation, and it has been in the collection for over forty years.



The inscription reads—

MAXI XER ASAR  
AB AN PA NUT AMEN  
USER-HA SA AN  
PA NUT NEBUAU—

that is, "The devoted to Osiris, priest-scribe of the Treasury of Amen, User-ha, son of Treasury-scribe Nebuan."

On finding this cone, I sent my first rough transcript and translation to Mr. Birch, the highest authority in this country on Egyptology, and he very kindly revised and corrected my reading.

User-ha was treasury-scribe (ὑπογραμμαρεὺς) in the reign of Thothmes IV., son of Amenophis II., and grandson of the Pharaoh of the Exodus, Thothmes III. (18th Dynasty). He lived about 1410, B.C.

His father, Nebuau, was also, as the cone attests, a Treasury-scribe, and I suppose him to be the same as the Nebuain, who was High Priest of Osiris in Abydos, and who lived in the reigns of Thothmes III. and of Amenophis II. He has left us an inscription, quoted in the *Zeitschrift für Egypt.*, Jan., 1876, and translated by Mr. Birch in his *Egyptian Texts* (Bagster. 1877, p. 25). In this he states that he enjoyed the favours of the king, was called to the House of Gold, made his place among its chiefs, and stretched his legs in the secret place. He also tells us that the king had him crowned with flowers, and that Amenophis II. repeated these favours. Whether User-ha inherited such marks of esteem our cone says not, but he enjoyed the same office under Ramen Kheperu.

The only point of special interest in the inscription is, that it shows an interesting variant of the very variable character *ua*, as seen in the figure.

---

X.—ON A FUNERAL CONE, BEARING AN INSCRIPTION OF TIRHAKAH.  
By ALEXANDER MACALISTER, M.D., Professor of Anatomy, University of Dublin.

[Read May 24th, 1880.]

A SHORT time ago I laid before the Academy a notice of the inscription on a Funeral Cone of the 18th Dynasty, which I found in the Museum of the University of Dublin. In the same drawer with that specimen I found a second, but very dissimilar cone, in many respects more interesting, though much more modern than the former.

I regret much that I have failed to trace either specimen to its original source. I can only find that both specimens were in the Museum more than forty years ago; and as the dates of the presentations of Egyptian objects to the Museum which are recorded are 1785, 1820, and 1835, I suppose that both these cones were among the unspecified Egyptian relics presented at one or other of the earlier dates.

The second cone is not nearly so well preserved as is that of User-ha, and contrasts with it in most respects. It is much shorter, with a broader disk and a more acute point; that of User-ha measures  $8\frac{1}{2}$  inches in length and  $2\frac{1}{2}$  inches in the diameter of its disk; while the cone under notice is only a little over 5 inches in length, and its disk measures  $3\frac{1}{2}$  inches in diameter. M. Mariette-Bey gives  $7\frac{1}{2}$  inches as the length of those in the Museum at Boulaq<sup>1</sup>, and Sir G. Wilkinson refers to some nearly a foot in length.

The material of the second cone is finer than that of the first, and harder. They are both made of an ochreous clay, mixed with fine ashes, but there is much less of the ashy ingredient in the second than in the first. They have both been burnt, and are fairly hard. In the second cone, the ochreous colour seems to permeate the whole substance, while the cone of User-ha is much yellower, and has had its lower end dipped in some reddish staining fluid, which has irregularly dyed its disk and the surrounding part for rather less than two inches, as in the cone figured by Sir G. Wilkinson.<sup>2</sup>

This cone was powdered over its disk with a fine white dust, which has closely adhered to it. The inscription, as on the cone of User-ha, is one of raised hieroglyphs, evidently produced by the cone being pressed against an incised mould; and, in both, the marks of the fingers and thumb of the maker still remain—the fine clay retaining, in the second cone, even the impression of the papillary ridges of the thumb of the potter, who must have had an unusually small hand.

<sup>1</sup> *Notice des principaux Monuments à Boulaq*, p. 176. Cairo, 1876.

<sup>2</sup> *Ancient Egyptians*, 1878, vol. iii. p. 437. Fig. 630, No. 3.

The inscription on this second cone is in vertical columns, separated by raised lines, while that in the cone of User-ha is in transverse lines. There are six such columns; but unfortunately the face of the cone has been so much worn that only two of these, the fourth and fifth, are in fair preservation; while in the others only a few individual characters, here and there, are at all distinguishable. In the first column, the first pair of characters are quite obliterated, and the third group is very much effaced, but seems to read "ma-tef hotep," followed by "an." The first is probably part of the name of the An, or scribe.

The second line begins with five illegible characters, followed by "S." Then come three more defaced signs, followed by "mer-t." This line is unintelligible. The third column is little more distinct, and has had its first character broken, but I think it to be "as," followed by "ar. suten heq \* \* \* nes pe-hat": "Osiris, King, ruling—belonging to the treasure-house."

The fourth column is perfectly distinct, except as to its last character, and reads "Neb ta-ta Taharqa mayeru ra mes (set?)": "Lord of both lands, Tihaka the blessed (or justified), born of the Sun." If the last character, which is very much blurred, be the syllable "set," it may mean "nourisher," but I am very doubtful of it.

The fifth column is only partly legible, and reads "mayeru ar ta neb per tes-het \*": "The justified son of the Lord of the house, binding in the place of \*." The last column begins with the word "per-t-\*, " i.e. "corn."

The cone seems thus a record of a scribe in the days of Tihakah, who was son of the overseer of the granaries. The king's name settles its date, and adds much to its interest; for such cones are most common at the beginning of the New Empire, especially during the 18th Dynasty. They become much fewer towards the 20th Dynasty, and are rarely to be met with after the accession of the Saïtes. This cone, dating as it does from the last reign of the 25th Dynasty, is thus interesting on account of the comparative rarity of similar monuments.

Tihakah the תִּיחָקָה of 2 Kings xix. 9, is the Τεαρχωv of Strabo (xv. 1, 6), whom that geographer describes as the greatest conqueror of the Ancient World. He is called in the Bible King of כְּנָעַן; and from the monuments found of his reign at El Berkel, we can identify that district as, at least, a part of his Ethiopian territory. That he was King of Egypt as well, and regarded by the inhabitants of the Thebaid as a lawful king, not an usurper, is shown by his name not having been effaced from his monuments, by the title, "Neb Ta Ta, mayeru ra mes," given on this cone, as well as by the contemporary testimony of the Assyrian Record, that he was besought by the Egyptians to resume the government after his defeat by Assurbanipal.<sup>3</sup>

<sup>3</sup> G. Smith, *Assyria from the Earliest Times*, p. 140.

What the true nature of these cones may have been we do not know. They have hitherto been found only at Thebes, and there they are specially abundant at the burying-place of Drah abu'l Neggah. They are never found within the tombs, but are placed around them, and they are frequently in duplicate or even in larger numbers. They have been supposed to be marks set round the burying-places to indicate the limits of the allotted spaces in that crowded cemetery; and this is, in the absence of special evidence, the most probable conjecture. Others have supposed them to be seals, as we know that the ancient Egyptians used to secure with seals their private treasure-houses (as in the story of Rhampsinitus, Herodotus, *Enterpe*, 121), but no corresponding impressions are found, most of the seals being in relief, as if stamped with an engraved die. Others suppose them to have been ornamental, or even passports, to permit strangers to visit the tombs, but none of these latter theories are probable. As they are so often multiple, it is to be hoped that a duplicate of this specimen may be found from which the whole inscription can be intelligently read.

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XI.—DESCRIPTION OF A GREAT SEPULCHRAL MOUND AT AYLESBURY-ROAD, NEAR DONNYBROOK, IN THE COUNTY OF DUBLIN, CONTAINING HUMAN AND ANIMAL REMAINS, AS WELL AS SOME OBJECTS OF ANTIQUARIAN INTEREST, REFERABLE TO THE TENTH OR ELEVENTH CENTURIES. By WILLIAM FRAZER, F.R.C.S.I., M.R.I.A. (With Woodcuts.)

[Read, November 10th, 1879.]

IN placing upon record the strange and unexpected discovery of a great quantity of human remains obtained at Donnybrook, near the city of Dublin, I intend to give a simple relation of the circumstances under which they were found, and to describe in as full a manner as I am able all the attendant features of importance, and to leave conjectures about the cause of their accumulation, and theories regarding the special period in Irish history when it took place, for matters of secondary consideration, open to discussion hereafter, as subjects on which differences of opinion might be entertained. Nor do I purpose to treat of the special ethnology of this find, except in brief detail, as it would deserve a distinct investigation—contenting myself with mere sketches of the leading points that were ascertained about the characters of the skulls and other bones.

The first intimation that reached me of this vast charnel heap was on the 3rd day of October, 1879, but no idea was then entertained of the great quantities of bones that were afterwards disinterred, or rather unearthed, for they were all found lying on the surface of the original soil, covered with a mere superficial layer of clay, not contained in graves, pits, or excavated cavities. I owe the information to my friend Mr. Thomas Wardrop, for which I feel much his debtor, as also for the liberal access he gave me to the locality itself, and for placing his workmen at my disposal when I required them to assist my researches by excavations. Mr. Wardrop had purchased the ground at Aylesbury-road to erect some houses, and he stated that, in digging up the field at the rear of his new houses, his workmen had procured several human bones; amongst them was a perfect skull of large size, that had the mark of a sword-cut upon its forehead, and they had found with them a spear-head of iron and an iron sword, all of which he had laid aside for me, and he invited me to examine the place where these were got. I visited the locality that evening, made a searching inquiry into every circumstance connected with the discovery of the bones, and got possession of the skull; of a sword, which was at once recognised as belonging to the Scandinavian type of weapon, being broad and double-edged, with iron hilt and pommel; and I also obtained the iron spear-head, which was likewise of undoubted Scandinavian origin.

The workmen during that day had unearthed additional human

bones lying to the south of the first-obtained skeleton; and it appearing probable that the discovery would prove of antiquarian interest, I made arrangements to follow up the subsequent stages of the diggings, and watch the excavations as they advanced. Professor Macalister, of Dublin University, at two subsequent periods was kind enough to superintend the unearthing of a quantity of these bones himself, and these excavations added a great deal to our knowledge of the manner in which the bodies were arranged, and their position in the mound, and we were able to confirm each other's observations. On one of these occasions Mr. Baily, Palæontologist to the Royal Geological Survey, aided me and assisted in identifying the shells and other animal remains that were exhumed. Mr. G. H. Kinahan also obliged me by inspecting the excavations, and his geological knowledge enabled us to secure from the rubbish plates of sandstone that had been used for fire-hearths; some pieces of sandstone which had served to sharpen instruments, such as knives, &c.; and a stone hammer, probably employed for opening oysters, such as is still used in the west of Ireland for that purpose.

The exact locality upon which the mound was situated is marked on maps of the city of Dublin and its suburbs, published a few years ago, as "Mount Erroll." It lies to the south of the recently-formed Aylesbury-road, and, of course, to the south of the River Dodder, on the opposite bank to the famed classic locality of Donnybrook Fairgreen—a fair of which we possess authentic records reaching so far back as the reign of King John, who granted it under charter to the citizens of Dublin. The field is situated to the east of the new chapel, which is at the corner of the Stillorgan-road. To describe it with greater exactness, it is on the plot of ground that immediately adjoins the row of houses on Seafield-terrace, from which it extends in an easterly direction; and an old road, now disused and closed up, but formerly known as Seaview-avenue, bounded its northern side. Many will recollect a favourite pathway along the fields, which led from this road to Sandymount, and was probably the remains of an ancient public path or road, long since disused, save for foot-passengers. This rather minute description of the locality is given, for houses are intended to be erected in the field and on the site of the mound, all traces of which must soon be removed; and an exact record of the situation had, therefore, better be preserved.

The surface of the ground on this portion of the field presented no traces of having been under tillage or broken up for cultivation, except in the vicinity of its southern boundary, where, outside the limits of the tumulus or burial mound, in a sunken part of the enclosure, some potato ridges were noticed. The field consisted of compact green sward, and had scattered over it a few trees, principally elm. Beyond the north-west edge of the mound grew an elm tree of under twenty years' growth; as the excavations advanced, its roots were uncovered, extending horizontally southwards into the mound, and through the human bones for upwards of fifty feet, the

small fibres of the roots marking some of the skulls and other bones by absorption of their bony tissue. At a distance of at least fifty feet from the trunk of the tree I measured one of its leading roots, and found it to be upwards of two inches in diameter.

When the site was first inspected it was possible to trace out a distinct wide-spread flattened elevation, or mound, of clay, that extended inwards from the border of the ancient obliterated highway into the field for about one hundred feet, of a circular form, measuring from east to west almost as much; its eastern limit was less defined, as the ground sloped gradually away. Mr. Wardrop had partitioned off a portion of this field towards the west end, and in digging here some forgotten stone drains became uncovered. But it deserves to be noted, that no trace of drains was present in the sepulchral mound, or near it; in fact, it must have remained from the remote date of its formation up to the present time altogether undisturbed and intact. Bordering the south and west of the mound, there was a slightly elevated bank; this boundary ridge had the deceptive appearance of constituting some kind of defensive embankment round the spot where the bodies lay. When it was better examined, it was ascertained to be of natural origin, for as the labourers excavated through the southern margin they found it to consist of undisturbed primitive soil, unbroken and continuous with the level surface of the original field, upon which the human remains rested, the colour and condition of the clay showing that it was a normal elevation of the primary soil, and not in any respect artificial.

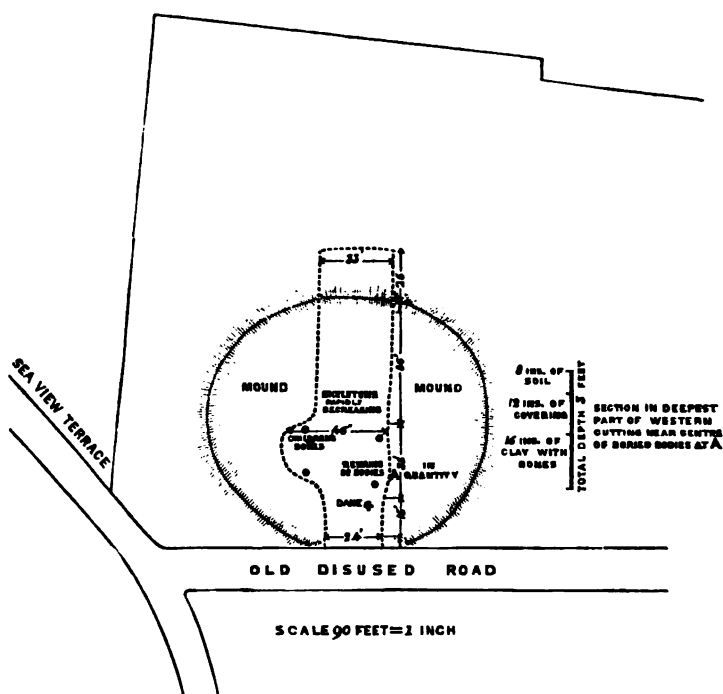
The disposition of the mass of bones and of the clay covering that composed the mound itself was rendered evident as the workmen excavated across it from north to south, cutting it open by a wide and shallow trench, averaging thirty feet in width, and progressing until they had passed through its entire extent, and for a distance of several feet beyond it. I consider the most satisfactory observations were made when the trench was opened to about half its length, and when the vertical boundaries of the cutting were recent, during dry weather and in bright sunlight. Under those circumstances, it was easy to distinguish the horizontal line that marked the surface of the field itself; beneath this line the section uniformly showed the undisturbed yellow clay, composed of stiff argillaceous material, and containing rounded and angular stones of ordinary argillaceous limestone, such as are common throughout the district; and in this there were no traces of graves or interments, nor any imbedded human remains, save where, through the lapse of time, the bones of a few of the lower stratum of skeletons resting on this surface had sunk down slightly into it.

This clay underlying the mound is similar in all respects to the ordinary soil of the district, and its comparative imperviousness to water would account for the remarkable state of preservation in which the majority of the skulls and other bones were found. This



had been assisted by the gentle fall of the surface of the field towards the east, and by the presence of the slight elevation or bank already noticed, which bounded the south and west sides, and must have diverted a quantity of the surface drainage.

Rising above the surface of this yellow soil was noticed a layer of darker-coloured clay, which acquired a deeper tint where the imbedded skeletons lay piled in great numbers. There were no traces whatever of human remains uncovered by the workmen until they had opened up the trench for about fifteen feet from the edge of the old roadway, com-



mencing at the northern side, and working to the south. They then uncovered the bones of the first human being, the head placed towards the north, and the limbs pointing southwards. This man's bones were described to me as large-sized, and they appeared from the description to have belonged to some person of unusually powerful frame. At his sides were placed the iron sword and spear already mentioned, and his head was that which I first obtained, and which bore the mark of a fatal sword-cut, perforating the frontal bone. At a short distance away, and lying on either side of his feet, the workmen

next uncovered two human skeletons, each a separate interment; these bodies they described as belonging to persons of much smaller size, and it is probable they were the remains of females. I regret that these bones got removed and mixed up with numerous other human remains that were soon after unearthed, as the excavations advanced, the bones themselves being broken during removal. Three iron arrowheads were subsequently found in the clay close to where the first discovery took place; and from the iron spear and sword buried by the side of the skeleton, and the wound on his head, we may conjecture that he was, in all probability, some leader or chief; at all events, he was the only individual found buried with weapons at his side in the entire heap; and apart from the rest of the slain he lay stretched at full length, interred north and south—a position that would indicate pagan, or at least non-Christian burial. The iron sword-hilt, which I will describe in more detail hereafter, when subjected to minute examination, was ascertained to have a rich ornamentation of inlaid gold and silver-work, such as we find figured decorating the swords of Norse Viking chieftains. In the great ethnological work, the *Crania Britannica*, of J. B. Davis, M.D., and J. Thurnam, M.D., we have recorded a good account, illustrated by engravings, of an ancient Norse skull that was found interred on the shores of Lough Larne, about three-quarters of a mile from the town, on the 7th November, 1840. It lay about seventy yards from the seashore, and five feet above the level of high water. "The skeleton lay not more than two feet below the surface, in a sandy soil, the head pointed to the N. W. Across the breast lay an iron double-edged sword, its hilt deposited towards the right hand; on the right side, and below the sword, was an iron lance-head; a small bronze pin, covered with ærugo, and a few fragments of bone, were found near the body.

A description of the discovery of this Larne body was laid before the Royal Irish Academy by Mr. J. Huband Smith, and was published in the *Proceedings*, vol. ii., p. 40, but the engravings of the skull and of the different objects obtained with it are to be found in the *Crania Britannica*. Worsaae would refer the date of the Larne interment to the eleventh century, and he mentions that the Icelandic historian Snorre Sturleson relates that in the beginning of the century "a desperate naval battle was fought between the Orkney Jarl Einar and the Irish king Konofögr in Ulfrics fiord on the coast of Ireland. The situation of this fiord remained unrecognised until it was discovered in a document issued by King John in the year 1210, at which time Lough Larne was still called "Wulsriche fiord." Worsaae's very probable inference, founded upon the relation of the historian, is that the Larne grave contained one of the Ostmen slain in the battle. The Rev. Dr. Reeves informs me that this identification of Ulfrics fiord was made originally in his work on the *Ecclesiastical Antiquities of Down, Connor, and Dromore*, and that Worsaae obtained the information from him.

The striking points of similarity between the circumstances of the Larne interment and that of the skeleton first obtained at Donnybrook would range them in a close relationship as to the time of their occurrence; and the class of warrior thus buried, the absence of coffin, stone cyst or other covering, the superficial interment of the skeletons—both lying in a northerly position on the soil, and having clay thrown over them, the burying with the bodies of their iron double-edged swords and iron lance-heads, are all of them so identical in character that one description would serve for both; nor was a bronze ring pin wanting at Donnybrook, though it was found at some distance in the mound subsequently. They differ principally in this, that the sword now obtained, from the rich gold and silver ornamentation of its hilt, would appear to have belonged to some chieftain of elevated rank; and we may believe that the female remains found buried at his feet are additional witnesses to the esteem in which his followers held him, and the penalty exacted for his loss. At all events this interment, though to some extent kept separate from the rest, and distinguished by the presence of arms, was in intimate connexion with the others in the mound. The bones lay on the same level upon the soil, and one common clay covering was over all. As the exhuming advanced, the great abundance of human bones that became exposed showed what a number of slain individuals composed the one great heap. Calculating roughly, it may be asserted that upwards of 600 beings must have been buried together, and this calculation is certainly under the real total. Towards the eastern side of the mound, which was the last part excavated, it was ascertained that the lowermost layer of human bodies had been there arranged with tolerable uniformity. Dr. Macalister and I uncovered at least two such rows placed one behind the other, with their heads pointing westward and their feet to the east; the skeletons lay in close apposition side by side; above these was a second layer of dead thrown down in every possible direction, and then there was a stratum of young bones, which formed the upper division or third superimposed layer of the mass, appearing as if they were pitched in upon the top of the others. These young skeletons were found in considerable numbers towards the eastern side of the mound; indeed it was not until more than half of it was excavated that the remains of children became conspicuous and attracted attention from their frequent recurrence. The parts of the mound first opened disclosed principally adult remains, which seemed heaped together regardless of order and lay in all possible positions. With rare exceptions, the entire of the skeletons were gathered within a circular space of 34 to 40 feet in circumference; still for about 15 feet further towards the south as the trench advanced, a few skeletons, either isolated or where they had fallen in small groups, continued to turn up, but beyond this no more were obtained; thus human remains were lying about until the excavations reached upwards of 60 feet through the mound, after which none were seen, though the trenching was continued for a total length of 130 feet. The

lower layer of skeletons which, as already stated, were found disposed at full length on the surface of the original clay soil of the field, had many of them their skulls still remaining in close proximity to their bodies, but there were also uncovered skulls separated from the remainder of the skeleton for an appreciable distance, and again, lower jaws separated from the skulls. These observations would appear to show that some time must have elapsed after death before they became interred or covered with clay, during which decomposition had set in, and the skulls become detached; other facts which were carefully ascertained led to the same conclusion: thus several crania had rolled with their base upwards, so that a quantity of clay had passed through the foramen magnum, and all such heads were as a rule in a far better state of preservation than those which lay with their bases downwards, when they continued empty and were more liable to become crushed and broken from external pressure. In washing out this clay that filled up the interior of the skulls, a miscellaneous collection of objects was obtained: broken pieces of human bones, decayed and loose teeth, a detached fragment of the angle of a jaw-bone, so large that it passed with difficulty through the foramen magnum, portions of the shells of cockles and periwinkles, and a few shells of snails of small size, and of the ordinary species found in the inside of old skulls. Several of these separated heads must have been decapitated, as they were discovered lying at considerable distances from the rest of the bodies. Of this we obtained more satisfactory evidence upon the eastern side of the mound, where Dr. Macalister also from his investigations arrived at a similar conclusion; for he detected there two different heaps each consisting of four heads collected together into groups; and on November 5, 1879, I obtained eight skulls, all of which were injured and in a broken condition lying gathered into one pile, of course, altogether separated from the rest of their bodies; they had undergone rough usage and broke into fragments when I endeavoured to remove them. The opinion I arrived at from examining them *in situ* was that, after being cut off they were rolled or kicked about, and the bones broken with extreme violence previous to gathering them into a heap. Again, at a later date, on November 28, the workmen who were searching for additional skulls for me discovered, close to the place where the other skull heaps had been procured and at a short distance from them, but more towards the N.E. of the excavations, another definite group consisting of eight skulls, also accumulated into a distinct heap and placed resting on the level of the original soil. These skulls I examined with special interest; and though they were damaged to a less degree than those obtained in the preceding groups, yet they all showed evidences of having sustained unusual injuries by being kicked about, tossed on the ground, or otherwise maltreated, for the bones of the face were smashed into fragments, and so detached that it was useless to attempt procuring a perfect specimen. One of the lower jaws belonging to this group had sustained a fracture of the body of the bone extending

from the first molar tooth through the osseous tissue. Another was broken across to the right of the symphysis menti between the canine and first premolar tooth; and further, with one solitary exception, all these skulls had the marks of perforating fractures such as would result from a large nail, a dagger-point, or the sharp spike of a battle-axe driven with force through the cranial bones: indeed a searching examination of the appearances thus produced impressed me with the conviction that they had been killed one after the other in utter wantonness of cruelty, in a similar manner, by fracturing their skulls with the point of a dagger; and judging from the close resemblance of the injuries they had all alike sustained, probably by the hands of one individual. The calvaria of this group, of which I retained six, all belonged to persons, male and female, of advanced years; and from the sutures being in progressive stages of obliteration, and the bones themselves of considerable hardness, it was obvious that they were the remains of persons far advanced towards the decline of life. To this circumstance I would ascribe their preservation, though the bones of the face had become broken and detached. Of these, one calvarium was pierced at the antero-superior part of the left parietal bone; another had sustained a perforating wound on the centre of the left parietal, and sword-cuts over the left orbit and forehead; a third skull had a perforating wound on the lower part of the left parietal bone; a fourth had a wound apparently caused by an arrow or spear-point that had also produced a perforating fracture on the lower and anterior portion of the left parietal; and a fifth was perforated in the angle of junction of the frontal, parietal, and temporal bones. All those fractures, as might be expected, were attended with removal of bone of the inner plate of cranium to a greater extent than the external wound. The practice of inflicting wounds of the scalp and skull of this nature is described as being an ordinary Danish custom in warfare; and the savage habit of decapitating the heads of their slain enemies is often recorded in the Celtic stories of battles in those early ages. In the *Book of the Dean of Lismore* containing translations of Gaelic ballads written down about A.D. 1530 in Argyshire, and published in Edinburgh in 1862, such a custom is described. In the poem of the *Heads*, p. 58, we have recorded several details of human heads hewn from the bodies of the slain in revenge for the death of Cuchullin. Again, the savage practice is recorded by our Irish annalists as one that was followed by the Danes, both those of Scandinavian origin and the more ferocious Danar or pirate invader: but it appears far stranger to learn that the native Irish Christians, when engaged in warfare against these Norsemen, thought themselves justified in adopting a similar course of procedure in retaliation for their outrages. Thus in A.D. 851, after the battle of Carlingford, "the Danes killed thrice their own number and they beheaded every one they killed;" see *Three Fragments of Irish Annals*, &c., p. 117, published by the Irish Archæological Society, 1860.

Again in A.D. 852, "A battle was given by Aedh, king of Ailech,

the most valiant king of his time, to the fleet of Gall-Gaedhil, *i.e.* they were Scoti and foster-children to the Northmen, and at one time they used to be called Northmen. They were defeated and slaughtered by Aedh, and many of their heads were carried off by Aedh, the son of Nial, with him, and the Irish were justified in committing this havoc, for these were accustomed to act like the Lochlanns" (see p. 129 last quoted work).

It is to these mixed races of Scoti and Danish northern invaders, who made constant raids on the Irish coasts during the ninth and tenth centuries, that I am inclined to ascribe this extensive massacre of persons of all ages, young and old, at Donnybrook, and the discovery of the different heaps of decapitated heads piled together in the mound is one of the reasons, amongst others, which induces me to form such an opinion. The piratical bands of Scoti are described by Irish historians as consisting of "persons who have renounced their baptism, and who had the customs of Northmen, and been fostered by them," and "though the original Northmen were bad to the Churches, these were far worse." The usual places of abode whence these wild Scottish catharans came were the outlying islands of Scotland, the Cantyre coasts, Aran, and the Isle of Man, whence they issued to join the predatory bands of Norse pirates in their invasions.

When uncovering such quantities of human remains, lying in close proximity to each other as they were examined into with attention, several striking results were noticed. Thus Dr. Macalister obtained two fetal femora resting undisturbed within the cavity of a female os innominatum; the unborn remains still being within the body of the parent. We also found where the hands of the dead had lain across their abdomen, that as decomposition advanced the bones of the hands fell down into the pelvic cavities, and lay upon the sacrum. In some the phalanges had even penetrated within the sacral foramina and lodged there. Again, on Nov. 24, 1879, I disinterred an infant's skull, which was crushed in, and within it were the separate bones of an adult's hand, probably its mother's. To give an illustration of the utter confusion in which many of the bodies were heaped together and intermingled, there was dug out one firm cohering mass bound with the adhesive argillaceous clay as it lay in the ground, which yielded two thigh bones placed horizontally in their natural position, a third thigh bone that was imbedded between them, and reversed, and two leg bones, also in reversed position. Thus it contained portions of three different adult human beings, and yet all were gathered lying like a bundle of sticks within a bulk so small that I could grasp it in my hands.

It would appear from the result of repeated testings made over different parts of the mound, that on the average three separate layers of human bodies could be recognised, piled above each other through the entire space, yet the vertical depth of the clay stratum within which, strictly considered, these bones were imbedded did not exceed eighteen inches to two feet. The clay in which they lay was the

common clay of the district, with rounded and angular calp fragments, but of dark colour, from its saturation with animal matter; and when the vertical sides of the trench were freshly exposed in dry weather, we could notice how this covering of clay had been thrown over the bodies in interring them, as it assumed an appearance of stratification different from the homogeneous structure of the undisturbed subjacent yellow till. As the excavation advanced towards the east side of the mound, we procured several squares of sandstone, or small flagstones, and a few composed of split calp, averaging each about a foot square, that still retained marks of having been employed for fire-stones; these were thrown in amongst the slain bodies, and some at least used as offensive weapons; thus I extracted one of these sandstone slabs from the place where it lay, pressing upon a skull belonging to the lowest layer of skeletons; it had driven the parietal bone inwards, breaking and depressing it. From the relative positions of this flagstone and of the head, it was impossible to mistake the appearances for an accidental occurrence: the fracture was distinct, and the injury must have been sustained during life, or immediately after the person dying. It presented all the characters observed in a recent fracture caused by extreme violence, and two layers of bodies lay covering it in the mound. Nor was this a solitary instance of finding these stones in contact with human heads, to all appearance hurled upon them with intent to cause injuries.

Mr. Kinahan selected for me other portions of sandstone that exhibited on their sides longitudinal groovings; these he ascribed to their having been employed for sharpening iron instruments, such as knives—an obvious explanation. Now sandstone is not found in or near the district of Donnybrook, therefore both the sharpening stones and the fire slabs must have been brought there; possibly they were obtained from the cottages of villagers residing close to the spot. Near some of the flagstones, and in contact with them, we got fragments of wood charcoal in tolerable abundance; and imbedded deep in the orbits of one of the most interesting and remarkable skulls that this excavation yielded—that of a microcephalic idiot—were numerous bits of this charcoal disseminated through the clay that filled its cavities. A good deal of charcoal was also scattered about where the flagstones lay, giving additional proof of wood fires having been kindled on the spot itself.

In a hammer-shaped nodule of calp limestone that I have, Mr. Kinahan also recognised a primitive oyster-opener, such as he has found still in daily use along the coasts of the west of Ireland, and which he informs me is employed with singular dexterity by the natives of these districts. At one end this hammer shows the marks of hard usage. The flint flake itself, which possibly was used for kindling a fire, was also picked up by a gentleman, and given to me on its discovery. It was the only fragment of flint obtained in the mound.

Certain marine shells were found, and require a notice. They

were obtained principally in the west and southern parts of the tumulus, and were scattered through the clay, and mixed up with it. These shells seemed like the emptyings of some old domestic refuse-heap or kitchen-midden, the rubbish of which, with its broken shells, was used on the spot to assist in covering over the bodies of the slain, and I found with them a fragment of early earthenware and a whorl of baked clay. Some broken pieces of these shells I have already said had even entered the interior of certain of the skulls, and were removed when washing out the clay that filled them. The following is a list of the mollusca that were noticed; they give us a clear idea of the then existing marine fauna of the district—a fauna that has undergone considerable modifications within recent times:—

|                                       |   |   |  |
|---------------------------------------|---|---|--|
| <i>Buccinum undatum</i> ,             | . | . | This shell is probably not obtainable at present nearer than Howth.  |
| <i>Littorina communis</i> ,           | . | . | Has now retired beyond Kingstown.  |
| <i>Littorina rudis</i> ,              | . | . | Do.  |
| <i>Littorina neritoides</i> ,         | . | . | A few specimens. Has now retired beyond Kingstown.   |
| <i>Solen</i> (sp.),                   | . | . | A fragment.  |
| <i>Ostrea edulis</i> (common),        | . | . | This, which was a common inhabitant of our bay, has within the last ten years been almost completely exterminated. |
| <i>Mytilus edulis</i> (much decayed), | . | . | Do.  |
| <i>Cardium edule</i> ,                | . | . | Still common at Sandymount.  |
| <i>Cardium echinatum</i> ,            | . | . | Got at Portmarnock.  |

Mr. Baily, Palæontologist to the Royal Geological Survey, had found several of these shells, and gave me the specimens he obtained, to add to my own collection. There was no large accumulation of cockle or oyster shells discovered, such as we should expect to procure if they had been cooked and eaten on the spot; instead of this they were dispersed through particular portions of the excavations, and presented the appearance of being spread out with the waste soil to cover the dead. About a foot deep of *debris* lay above the bones, and this was all that separated them from the surface, save a dense layer of old grass sod, which averaged a thickness of eight inches additional, varying in different places an inch more or less.

Bones belonging to different domestic animals were identified; these included the bones of a small horse or ass, the cow, calf, sheep, pig, dog, and possibly wolf. The animal remains were not in sufficient quantity to have supplied the necessities of an invading force encamped on the spot for even a few weeks, and there were no arrangements discoverable for permanent cooking-places, and no special midden-heap containing the bones of the animals. They suggested the idea of being the *debris* of an impromptu feast held by savages in the midst of their prisoners, and when these were being slain the bones of the animals



were scattered promiscuously through the human bodies, together with the flaggings of sandstone on which the food was cooked, and the embers of the charcoal fires.

Of the broken and cut bones of the ox I preserved three jaw-bones, teeth, parts of ribs, the upper fragment of a thigh bone, and one of the vertebræ: this retains on it the marks of being divided by a sharp cutting or sawing instrument. The head of the femur, cut across as it lay within the acetabulum, and neatly sawn, was also picked up. The upper part of a thigh bone belonging to a young calf, and an incisor tooth were likewise gathered; they were portions of a very young animal, which would appear to point to the spring or summer months as the season of the year when this massacre was perpetrated. Sheep remains were rather abundant. I kept portions of jaws belonging to three or four of them, large and small trotter bones, and vertebræ sawn across in an oblique direction. Of the pig, parts of the lower jaw were preserved, and separate teeth of the animal; among them were the tusks of two old boars and of a young one. Of the horse or ass, both teeth and bones were got. The left ramus of a lower jaw-bone of a large-sized dog was found by Mr. Moss, and a few days after I picked up the corresponding right bone. Dr. Macalister likewise found bones of this animal, and has decided that it was a dog of large size, possibly a wolf dog, not a wolf.

October, 1880, I got the upper jaws and snout of an animal that I believe may have been a wolf. It resembles the remains of that animal which I have examined in some English museums, but the identification is full of difficulty. It is worth directing attention to the fact that, common as we know the wolf once was in Ireland, the discovery of its bones is of exceptional rarity, for which it is difficult to offer any satisfactory explanation. The publications of the Irish Archæological Society in 1860 afford an interesting illustration, taken from Irish history, of the habit of the dog or wolf to prey upon the bodies of the slain. A.D. 869, in a battle where the Norsemen were defeated, the writer says: "The son of Gaithin attacked them as the wolf attacks sheep, and they fled into a bog, and in that bog they were all killed, and dogs devoured their bodies."—See p. 167, *Three Fragments of Irish Annals*, &c.

It was difficult to conjecture why scattered remains of different domestic animals which had been cooked and eaten should become dispersed through a mound of slain human beings, and the difficulty was increased when later still we found the slabs of cooking stones and the charcoal used for firing also scattered about, and the stones themselves apparently used for offensive missiles: but in referring to published Irish annals that record the history of Danish invasions we obtain the following startling account of similar practices pursued by these people in one of their battle-fields fought in the North of Ireland.

A.D. 851, a battle took place between the Norsemen and Danes in the fifth year of the reign of Maelsechlainn. The Norse galleys

under their chieftains went to Carlingford Lough; and it is recorded that the Danes were defeated in a sea fight. A second battle followed, fought both on sea and land; in this the Danes were successful; then we have the following story: "Now at this time Maelsechlainn, king of Teamhir, sent ambassadors to the Danes, and on their arrival the Danes were cooking, and the supports of their cauldrons were heaps of the bodies of the Lochlanns, and one end of the spit on which the meat was hung was stuck into the bodies of the Lochlanns, and the fire was burning the bodies, &c., &c. . . . The ambassadors of Maelsechlainn beheld these in this condition, and they reproached the Danes with this, and the Danes replied 'This is the way they would like to have us.'"—See p. 125, *Three Fragments of Irish Annals*, &c.

If the remains of the horse or ass which were also found lying scattered about had been eaten by these people, it would afford strong additional evidence for concluding they were Danish and pagan, for at an early period the Anglo-Saxons relinquished the use of horse-flesh, and there are abundant proofs that the Irish Christians would not partake of a food so repugnant to all the received ideas of Eastern Christianity. I can only say that the horse remains lay scattered about in the same way as those of the cow, pig, and sheep, and presented similar appearance of having been used for food.

At an early stage of the investigation, it became evident that the human remains found included those of persons of each sex and of every age, from infancy to advanced life. I thought it, however, worth calculating the average proportions of males and females present: therefore, out of a heap of bones disinterred towards the centre of the mound, not selected, but taken as they lay on the surface of the ground after being dug up, I gathered all the sacral bones that remained unbroken and fit for measurement, rejecting about ten which were fragmentary and decayed, and retaining seventeen. These were measured with accuracy, and the result gave of undoubted female remains nine, and of males eight. For this purpose Dr. Macalister compiled for me a Table of measurements of male and females acria; and as the importance of this bone is admitted in distinguishing between skeletons of males and females, especially for objects of medical jurisprudence, and as the usual works of reference give only loose generalities instead of exact data, the following important measurements are subjoined:—

#### MEASUREMENTS OF SACRAL BONES.

##### *Males.*

Length,  $4\frac{1}{2}$  to  $5\frac{1}{2}$  inches.

Breadth,  $4\frac{1}{4}$  to  $4\frac{1}{2}$  inches.

Curve of the transverse diameter,  $\frac{1}{4}$  of inch.

The vertical curve begins at the second vertebra.

*Females.*

Length,  $4\frac{1}{2}$  to 5 inches. This is a point of secondary importance.

Breadth,  $4\frac{1}{2}$  to  $5\frac{1}{2}$  inches. Much more distinctive.

Curve of the transverse diameter,  $\frac{1}{4}$  of inch. A characteristic feature.

The vertical curve begins at the third vertebra, also a distinctive point.

In addition to the thigh bones of the unborn child, found by Dr. Macalister, I got other similar remains, and have preserved the lower jaw and half the frontal bone of an infant aged about the seventh month of foetal life, and also the jaw-bone of a recently born child.

So numerous were the remains of young children, that a selection of their lower jaws afforded examples of every stage of infantile dentition, and I gathered a large and complete series of them, and from this onward to youth and perfect maturity, until the last permanent molars became completely developed. The teeth as a rule were found to be unusually strong and healthy, but toothache was not altogether unknown, and sufficient examples of diseased fangs and even a perforation of the jaw-bone from abscess at the root of a tooth could be identified.

The worn down condition of the grinding surfaces of these teeth was most remarkable; they show an amount of attrition altogether unknown at present in the British Isles; of course this is best seen in mature jaws, and during advancing life. Excessive attrition is common to all races that use food requiring a considerable degree of mastication; thus it occurs both in those who employ corn ground in hand querns, in which it becomes mixed with more or less of the sand from the mill; and it has likewise been noticed in tribes that live upon fish diet almost exclusively, as in the neighbourhood of Vancouver's Island. There were, further, several jaw bones that had belonged to persons of considerably advanced age, where the teeth had almost or altogether fallen out, and in which the bony alveolar tissue was absorbed, and had disappeared both in lower and upper jaws.

Amongst the bones which I obtained there are a number that appear worth describing, either for their size, or because they present evidences of diseased conditions. The vertebræ and some of the bones of a man were dug up who must have, when living, been of exceptional size. The vertebræ are wider—not thicker—than those preserved in the Anatomical Museum of the Dublin University, belonging to the famous Irish giant, O'Brien, so their possessor was probably a person of great bulk.

Platycnemic tibiae were also found to be very numerous. Tibiae

of this character are ascertained to be of frequent occurrence in French and English graveyards, referrible to dates from the fourth to the tenth century. Their presence and frequency in the Donnybrook find affords us strong additional corroboration as to the early date to which they must be ascribed. Platynemic tibiae were first observed in the cave-dwellers buried at Cro-Magnon in Perigord, belonging to the ancient Stone Period, or that when the reindeer roamed over the forests of Southern Europe. From this time they are noticed extending through the ages when polished stone weapons were employed; and out of 200 tibiae collected near Paris, at St. Marcel and St. Germain des Pres, in cemeteries belonging to dates anterior to the tenth century, 5.25 per cent. were of this platynemic form.

With the platynemic tibiae were found "channelled fibulae" having inordinately large longitudinal grooves for the insertion of muscles. Another osseous peculiarity of primitive type, the femur "a colonne" was of rather common occurrence: this primitive modification of the human thigh bone is recognised by the great development of those two posterior ridges that form the *linea aspera*, their prominence and separation from each other leaving an intermediate space and producing a pilaster-like appearance that extends along the middle two-fifths of the posterior aspect of the bone. Such femurs are also found in the Cro-Magnon cave-dwellers; and in the cemeteries near Paris already mentioned, it was ascertained that out of 200 femurs; in 6.5 per cent. the column was very obvious, and in 36 per cent. was slightly seen. M. Topinard says, "It seems that these peculiarities of the tibiae, femora and fibulae belonged to one and the same race in Western Europe. The 30 subjects from the cave at Sordes in the Basque Territory all exhibit them."

Several of the jaw bones were distinguished by their massive form and depth, square-shaped angles, and the unusual development of the osseous ridges for muscular attachments. Their glossal spines were developed to an extent that I believe is never seen at the present day, at least in Irish jaws, forming sharp projecting bony spines in some instances measuring fully a quarter inch in length.

There were some good specimens obtained of bones affected with chronic rheumatic arthritis. The polished eburnation of the head of a femur, its peculiar shape and osseous growths, afford unmistakeable proof that its former possessor suffered from this painful affection, so well described and illustrated by the late Dr. Robert Adams. The number of bones thus affected showed that this disease was not uncommon.

There is also a remarkable specimen of depression observed upon the upper portion of the outer surface of a frontal bone. This appears to have resulted from long-continued pressure caused by the growth of some external tumour, most probably a congenital wen of considerable size, or at least one that must have become developed early in the individual's life.

The results noticed of an old fracture of both the tibia and fibula

at the upper third are worth describing. The oblique direction of the fracture is seen, and an enormous mass of callus has united the fractured bones into one, obliterating the interosseous space. The upper end of the tibia is expanded and hollow, and was, it is probable, the seat of a local necrosis.

Two sacral bones of females were picked up, both of which are very crooked, one-half being less developed than the opposite, and the coccygeal termination, instead of being in the medial line, is at the side. These appear due to some injury sustained in early life.

Portions of the skull of an idiot were likewise obtained; they possess an unusual amount of interest. The frontal bone shows the cranium to have been that of a young person. The orbital openings are placed on a different level, the right orbit being considerably more elevated than the left. The bone itself is imperfectly developed, the entire right half being smaller than the left, and a similar condition is recognisable in the occipital bone. A face such as this individual must have possessed is delineated in Dr. Robert Smith's work on "Fractures and Dislocations." It is described as an example of the rare congenital dislocation of the lower jaw; and on looking at his plate, and comparing it with the frontal bone now found, it is impossible not to be struck with their identity of aspect. The subject is so fully worked out by Dr. Smith that it is unnecessary to do more than to refer to his accurate description. He considered this malformation so rare that in addition to his own case he records only one other example briefly noticed by M. Guerin. The case which Dr. Smith published was that of an idiot who died in the lunatic asylum at Island-bridge; the details are consequently most perfect. I regret to say that neither the lower jaw nor any bones of the face are forthcoming of my specimen, which I picked out of a mixed heap of bones thrown together; so that although there is every probability of its being an example of the very rare congenital luxation of the lower jaw, we have only the frontal and occipital bones preserved, and a portion of the parietal.

Another idiotic skull, that of a microcephalus, is in perfect preservation. It has a fairly elevated forehead, is of neat rounded shape, but the upper jaw is decidedly prognathous, the lower jaw being small and of moderate development; it resembles in miniature in every respect the class of skull which I consider of Celtic or Irish type, and of which I possess several fully developed examples from this find, but it measures in circumference only 438 millimetres. The arrest of its development has not been caused by synostosis, for the sutures are unclosed and perfect, and the age of its possessor is easily calculated, as the third molars are still in process of becoming developed. M. Broca refers to this class of demi-microcephales "all non-deformed skulls of males that possess a horizontal circumference of less than 480 millimetres, and of females those under 475 millimetres. If belonging to Europeans, they should possess an internal capacity below 1150 cubic centimetres." This condition of general or partial arrest of cerebral development will commence during the stage of intra-uterine exist-

ence, and it therefore constitutes an important anatomical variety of idiocy. The well-known Hottentot Venus, of whom I possess a portrait drawn to scale, who was exhibited as a show in different parts of Europe several years ago, and whose skeleton is preserved in a Parisian museum, was an example of this idiotic demi-microcephale. Similar skulls are occasionally to be noticed in all our large asylums for the insane and for idiots; and the Aztec children, so-called, who were shown in Dublin lately, are specimens of microcephalic idiots with dwarfed bodies.

Two portions of a skull of unusual thickness were obtained. In some parts it is almost one-third of an inch thick, measuring 15 millimetres exactly. This appears to be a natural and healthy bone, the thickening being caused by no disease whatever.

In considering the shapes of the skulls obtained that belonged to adults, for classing them, I have selected out of a large number three specimens which will illustrate the three great divisions of crania which are usually described. Of these No. 44 will represent a dolichocephalic skull, No. 21 an intermediate mesaticephalic form, and No. 22 is brachycephalic.

These classifications, which depend on the relation or ratio that the antero-posterior diameter will bear to the transverse measurement of the skull at its widest part, is calculated by the formula  $\frac{\text{Trans. diam} \times 100}{\text{an. post. diam.}}$ ; but such calculations are facilitated by the excellent Tables of Professor Flower, published in the last Catalogue of the Museum of the Royal College of Surgeons of England. The index varies from

750 and under for dolichocephali,  
750 to 800 for mesaticephali,  
800 and upwards for brachycephali.

Now the cranium No. 44 affords us an index so low as 704. This is an exceptionally low result, for the skull of the average Australian savage reaches 71·49, and even the Hottentot amounts to 72·42. This cranium will agree in measurement and shape with those long and narrow skulls that are found in Long Barrows. It has lost the face and lower jaw.

No. 21, the mesaticephalic skull, is found to possess when measured an index of 754; this corresponds with the skulls of the Dolmen builders, and that of the Ancient Egyptians. It also corresponds exactly with the index ascribed by Messrs. Thurnam and Davis to the ancient Irish skull. From several considerations I am led to believe this is a typical Celtic or Irish cranium.

But on examining the skull which I first obtained, No. 22, and which, I believe, was that interred with the sword and spear, having the deep sword-cut in its frontal bone, the index rises to 833; this is,

therefore, a good specimen of a brachycephalic skull, and it corresponds in its measurements with the skulls belonging to the Croat, different German tribes, and the Finlander. I believe its original possessor was one of the mixed people who originally came from the shores of the Baltic, and whom we know in Irish history as Pirate or Black Danes.

So far as the general facies is concerned, I think we may safely recognise two different and distinct types. One of these is straight-faced or orthognathous; the other possesses a projecting upper jaw, which produces a prognathous appearance. There is no difficulty in distinguishing well-marked specimens of both forms, but some appear with intermediate features.

The skull marked 19 is an example of the orthognathous face, 22 is intermediate, 21 is prognathous.

The little microcephalic skull, as I have already stated, is likewise prognathous. The degree of forward projection of the upper jaw in any skull is ascertained by obtaining the alveolar index, the formula for which is  $\frac{\text{basialveolar length} \times 100}{\text{basilar nasal measure}}$ . Whenever the ascertained index ranges below 980, the face must be classed as orthognathous. An index ranging from 980 to 1030 is mesognathous, and all above 1030 fall into the class of prognathous individuals.

When these typical skulls are arranged beside each other, it is easy to see the great and striking differences they present in form, and in the aspect of their faces.

I think we can amongst these skulls recognise some which fall under the Scandinavian type of Thurnam and Davis, and that, therefore, will correspond with numerous examples of people still existing in our land, in Scotland, and in the maritime districts of the east of England, where Danish settlers planted their numerous colonies. To quote the words of these accurate observers: "The skull is small and regular, has a long slender elevated aquiline nose, closely corresponding with such as prevails in the northern counties of England where Scandinavian blood predominates. A narrow, long, orthognathous face, an upright square forehead, yet neither decidedly broad nor high, having a frontal suture, a long oval outline in the vertical aspect, with distinct parietal tubers, a globose tumidness in the supra-occipital region, and a large foramen magnum."

The lower jaw belonging to this class of skull is distinguished by its massive structure, square outline, and strong everted angles. The lines for muscular attachment are always prominently developed; the chin square-shaped, projecting, and forming a predominating feature, whilst the glossal tubercles are unusually developed, becoming in some even long bony growths.

The second variety of skull is smaller, of mesaticcephalic form, and of neat outline, but it presents a prominent prognathous upper jaw, which gives it a very peculiar and distinctive appearance. The nose

is short, wide, and often turned up, with depressed bridge. The lower jaw is softer in outline, less massive, rounded, and does not possess the harsh shape and strong markings of the Scandinavian type; the chin is little, if at all, prominent, and the appearance of the face is such as we have numerous examples of still in the south and west of Ireland, especially in inland districts, where the Celt has remained free from intermixture with Danish blood. I believe this form of skull represents a race that inhabited this country from a much earlier date than our Danish colonists.

The contributions to Irish ethnology have heretofore been few; but since writing the above account I have read over the Paper which was published by the late Sir William Wilde, and laid before the King and Queen's College of Physicians in the year 1844, upon the "Ethnology of the Ancient Irish Races." Sir William regarded the question from a considerably earlier period in our history, for his observations relate almost without exception to those forms of crania which were obtained from barrows, tumuli, and kistvaens, all primitive varieties of interment employed by races in Ireland in distant ages, far antecedent to the date at which the Donnybrook mound was formed. The conclusions at which he arrived may be compared, with much interest, along with those that appear justified by our examinations of the Donnybrook remains. Thus he has directed special notice to two different varieties of crania, both belonging to, and distinctive of, our early Irish races, whilst he further figured and described, as referrible to a much later period in time, the crania of Danish and Scandinavian origin, the latter being similar to those which I have obtained possessing Danish characteristics.

Now of the two primitive Irish races which he designates as Firbolg and Celt, he has given typical figures. One of these, the Firbolg cranium, will, in all probability, correspond with the remarkable dolichocephalic skull that I have described. These "long-headed, black-visaged, dark-haired, swarthy aborigines," possessed skulls that are principally characterised by "their extreme length from before backwards," or what is technically termed the "antero-posterior diameter" and the flatness of their sides. He says in addition, "Now we find similar conditions of head still existing among the modern inhabitants of this country, particularly beyond the Shannon, where the darker Firbolg race may still be traced as distinct from the more globular-headed, light-eyed, fair-haired Celtic people who live to the north-east of that river."

The earlier primitive interments of the Celtic race are to be found in kistvaens or sandstone chambers, and probably they were the race that used urn-burial also. Their origin, whence they came, and what countries they inhabited before arriving here, has proved a fertile field for speculation, but still remains an unsettled question. They may be, and probably are, the race termed in old Irish annals the "Tuatha de Danaan," who are said to have invaded and overcome the original Firbolg inhabitants, and they would seem to have intro-



duced, or at least known the use of, bronze weapons, just as at a much later period, and within historic times, the Scandinavian races were distinguished for their knowledge and free use of weapons made of iron. The crania of these Celts are "better proportioned, higher, more globular, and approach more to the better forms of Indo-European, or Caucasian skulls."

We notice, therefore, in Sir William Wilde's memoir, three separate and distinct classes of skull found in Ireland, the Firbolg, Celtic, and Dane; and it was with much surprise and interest that, after collecting all the crania I could secure from the Donnybrook mound, and submitting them to rigid examination and the most accurate of all modes of testing, namely, careful measurement and calculation, that from the group three different varieties of crania were evolved. One of these—the rarest of all—was a long-headed form of skull of low organization, that fairly corresponds with that of a Firbolg. Much more numerous were the class of Celtic skulls, properly so-called; and in addition we had types different from both, and ranging themselves with those of Scandinavian origin, and with British skulls derived from Scandinavian ancestry.

When studying the special osteological peculiarities of the human remains that were contained in this mound, I was led to consider they ought to afford "humeri with perforation of the olecranon cavity," a characteristic feature of less importance than the discovery of platyencemic tibiae, but still one of much interest and value for corroboration of the primitive period to which these bones must be referred, as it is a condition of bony structure which dates back as an ordinary racial character to the Polished Stone Period, and to that of the Dolmen builders, and might reasonably be expected to be found in conjunction with the platyencemic tibiae.

The workmen were accordingly directed to make special search for these missing perforated humeri, and they were at once found, as I expected they would be, and since that time I have obtained several of them; they afford us an additional point of much interest in the history of this discovery, and one deserving of being recorded.

The next subject to be considered is a description of the few objects of archæologic interest that were obtained in the course of the excavations; and limited as their number is, they are of service in enabling us to form at least an approximate idea as to the probable age of the interments.

The most important discovery was the Danish sword (Fig. 1): though broken across at the apex, and its pommel and hilt separated by the rusting of the middle portion of the handle, it still is in such a perfect condition that we can have no difficulty in recognising its distinctive characters. It is a broad-bladed straight double-edged weapon; twenty-one inches of the blade remain attached to the hilt, and it measures fifty-eight millimetres transversely near the hilt, tapering somewhat upwards. The iron hilt and pommel were found to be richly decorated with an inlaid pattern of gold and silver, and the

handle retained evident traces of having been bound round by some description of fine wire, possibly gold, but all remains of the metal here were lost. The King of Denmark some years since presented a specimen of this description of sword to the Museum of the Royal Irish Academy as an example of the Danish type of weapon, and they are found occasionally turning up in different parts of Ireland; thus others of similar shape which are in the Academy's collection were obtained in the fields near Kilmainham, and the sword which was discovered with the Danish interment at Larne, already mentioned, was identical in form with that now got at Donnybrook.

The peculiar interest attaching to this weapon is its rich inlaying of gold and silver both in hilt and pommel; it is unique in so far that no other similarly-ornamented sword has up to this time ever been found in Ireland, and it corresponds with the descriptions and drawings of decorated swords in the Danish Museum, such as we read of in old northern legends as being borne by Norse chiefs and commanders of high rank and distinction. The beautiful pattern of the inlaying will be best understood by the illustration on the next page (Fig. 3); its elegance and the mode in which the workman executed his task speak much for his talent and his taste. In an illustrated folio work of Professor Worsaae on Danish Antiquities, I find a drawing of an ornamental fibula or brooch which displays a similar pattern in every respect.

The iron spear-head (Fig. 2) that was found buried together with the sword also afforded us a recognised Danish form of this weapon; we find it figured in Worsaae's account of the Antiquities of Denmark, and it likewise corresponds in shape with the spear-top found in the Larne grave. This spear did good work in its master's hand; it still displays, adhering to its rusted surface, fragments of human bone.

Subsequent to the discovery of the sword and spear, a lady searching on the spot found three iron arrow-heads, one of which I obtained.



Fig. 1.

Fig. 2.

A rude dagger-blade of iron was also picked up close to the spot where the group of decapitated and perforated skulls lay, and it was

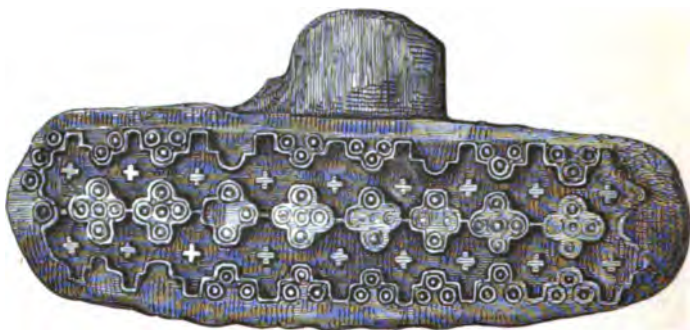
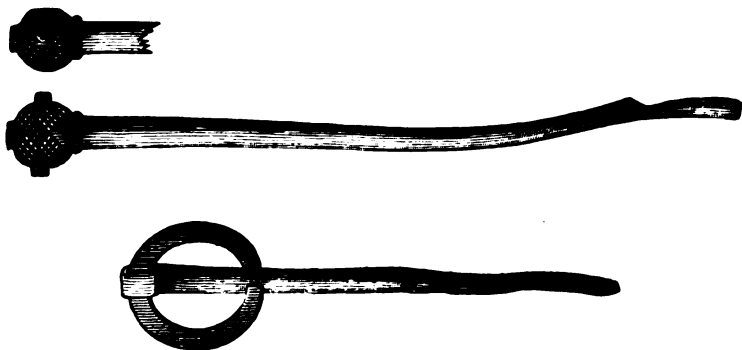


Fig. 3.

observed that the point of this dagger fitted with exactness into the nail-like perforations in the skulls.

Two bronze pins were obtained, one of them a straight pin about



Figs. 4 and 5.

3½ inches in length, its head ornamented with a pattern like the cross-markings of a pine-apple or fir cone (Fig. 4). The second was one of

the characteristic Irish bronze pins of primitive manufacture, having a ring attached to its upper part; this was broken by the workmen when found, probably to try whether it was made of gold; it is such a pin both in shape and material as men and women were in the habit of using to fasten their garments. This pin (Fig. 5) was discovered lying on the level of the original soil, about twenty feet to the south of the great heap of human bodies, and not near to any skeleton, in a place where it appears to have been dropped and lost.

A simple ring of bronze was discovered *in situ* upon the finger of a skeleton, and another made of bronze wire twisted into an ornamen-

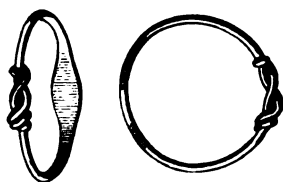


Fig. 6.

tal pattern, having a rude resemblance to two interlaced snakes (Fig. 6), was got by Dr. Todhunter, also from off the bone of the finger it encircled.

An iron ring was obtained by Dr. Macalister and myself, still remaining around the upper part of the humerus of a young female. And a second ring of rather smaller size was brought to me a few days afterwards by the workmen who found it when digging up some bones; they likewise got a thin bronze ring that measured about two inches in circumference. All these consisted of simple thin rings of metal.

A whorl of baked earthenware, such as used to be employed for

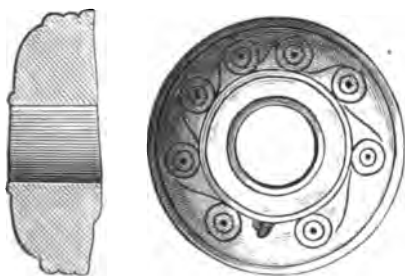


Fig. 7.

spinning, and of which an illustration is given (Fig. 7), was picked up during the excavation; it has a pretty and peculiar modification of a well-known Etruscan and Greek pattern ornamenting its surface. In

this primitive imitation of the wave ornament the curved end of the wave is represented by a single central point, which is surrounded by concentric circles, and these are joined together by means of graceful waved lines.

Such things, with a few fragments of rusted iron, the use of which it was difficult to determine, constituted the entire of the objects discovered. It would appear, therefore, that the mound contained the bones of one warrior buried apart, with his arms, sword and spear, that he had received a wound on the head from a sword sufficient to account for his death, and that at his feet were lying the remains of two women.

That the clay mound likewise covered the bones of a number of men, women, and children, thrown into a common heap; several of whom afforded conclusive evidence of having died by violence. That, as might be expected, such marks were best shown by sword-cuts, perforations from dagger or spear-points, and fractures of the bones of the head and lower jaw. That at least four groups of heads were counted, that must have been cut off and then piled up; and that, so far as could be judged, in addition to perforating wounds of the skull, these heads had received violent usage, by being thrown or kicked about, so that the face bones were broken. That with the human skeletons were mixed the scattered remains of domestic animals, detached, and sawed and broken, so that they appeared to have been cooked on the spot for human food. And that, further, the cooking stones, the charcoal of the fires, and the flint itself to kindle a fire, were all forthcoming.

The result of the exploration is conclusive that these remains of human beings were not men slain in battle. We found those of the unborn infant, the child in arms, the idiot, the lame, the mother as well as her children, both sexes alike mixed in indiscriminate confusion; and all ages, from the commencement of life to the men and women who had arrived at protracted periods of existence, were here in a common grave. Besides these clear evidences of indiscriminating massacre, we have sufficient grounds for concluding that these poor victims were stripped and plundered of all they possessed; not a single remnant of personal property or ornament was left on their persons, save two little brass rings, and the worthless iron band that probably bound a slave girl's arm. The two bronze pins that were discovered are sufficient to show that objects of this description were in ordinary use at the date of the massacre, and with the class of people found slain. They had probably fallen from the hands of the robbers on the surface of the field, and been lost there. I need not say that there were no coins of any description procured; possibly coined money was as yet unknown in Ireland, or if they possessed any, the victors took good care not to leave it behind them.

The exact date to which this wholesale destruction of human life should be referred must, in the absence of distinct historic records, remain to some extent a matter for conjecture. Sir Samuel Ferguson,

in his volume of poems lately published, has given a translation of the old bardic tale of the destruction of the house (Bruidia) of Da Derga and the death of King Conary Cor by the sons of Don Dessa and Ing Mel Caech. In addition to the numerous historic features of this tale, and its strange admixture of legendary belief and of fairy interference, it preserves for us this fact, that so far back as towards the end of Irish pagan times, and before the first teaching of Christian doctrines, there was a leading line of road radiating from Tara, and passing over the river Dodder not far from the sea shore; and situated on this line of road was the guest house or Bruidin da Derga, where in those primitive times a battle was fought, and numbers of warriors slain by an invading force of Pirates, the banished Irish chieftains having leagued with a British leader, Ingcel, to plunder the Irish coast. Sir Samuel Ferguson says: "In the reign of Henry III. two king's highways are described as leading from Dublin southwards; one near the sea-shore, and the other by Donnybrook. Booterstown is regarded as preserving the name of the 'bothair,' or main line of road to which they appear to have converged." It must be admitted that it becomes a matter of great interest to find preserved in an old bardic tale the distinct record of a battlefield situated in close proximity, so far as we can judge, to the scene of the present remarkable death mound; but I fear all the evidence on the subject points to a far later date for its origin than the death of King Conary.

Some speculations were made by persons ignorant of the ascertained facts, as to this slaughter being caused by the swords and bullets of Cromwell's soldiery, and to the attacks they made on Baggotrath Castle; but Baggotrath lay altogether on the opposite, or western, side of the Dodder, and quite out of the way, close to the present barracks of Beggar's-bush. Besides there was not a trace of pistol or gun-shot wound, nor a fragment of a lead bullet got in the entire mound. The injuries sustained were all those inflicted by sword or spear, not by gunpowder. Still less satisfactory was the idea that the mound contained the remains of those Dublin citizens slaughtered by the Wicklow tribes upon Black Easter Monday, A.D. 1209, when the Tooles and Byrnes fell on them when enjoying their sports at Cullenswood. The scene of this engagement still preserves the name of the Bloody Fields, and lies across the western bank of the Dodder; and I believe it would be useless to expect ever to find traces of slain bodies on this field, for the dead were removed to Dublin, and buried by the citizens.

The most probable explanation appears to be, that it was the result of one of those piratical descents or invasions of the Irish coasts made by robber Vikings, Danars, or Black Danes, and their ferocious allies from the Island of Scotland, which were so common in the ninth and tenth centuries. These invasions took place subsequent to, and were altogether different from, the Scandinavian settlements in Ireland of Lochlanns or Azure Gentiles, who are described in the chronicles of the time by their distinctive feature of being a white or fair-haired

race. They came to our shores under the guidance of recognised leaders, who were men of admitted rank and ability, and often claimed royal descent, and were acknowledged as their kings and chieftains. These colonists settled down and established themselves as the permanent owners of extensive districts of country. Thus they possessed the land extending for ten or fifteen miles to the north of Dublin, termed Fingal, and that to the south by Donnybrook to Dalkey; their fortified town on the Liffey, Ostmanstown, being their principal centre. Clondalkin and Swords were also fortified by them. To these Scandinavian princes, when they had consolidated their rule, we are indebted for the first coinages of silver money, and they were encouragers of trade and commerce. No doubt these warriors plundered churches and abbeys; and when they first invaded the land, they devastated it, took all they could, and drove away or enslaved the inhabitants. In time they settled down, acquired property, built our cathedrals, erected permanent dwellings and fortifications, and continued to reside here until the Norman barons in their turn arrived, when they joined with them as allies and fellow-warriors. Of different race came the Danar, the black or dark-haired foreigner, who fought against and plundered the fair Norseman as fiercely as he warred with and robbed the native Irishry; but, as Dr. Todd remarks, it is to be regretted that the writers of our annals "do not always clearly distinguish between them in the descriptions of their devastations in Ireland. We cannot even be sure that the name Dane is not sometimes given to the Norwegian. The word Dane in later times was used to signify pirate robber—a cruel and ferocious barbarian without distinction of nation."

The earliest of these piratical northern invasions is recorded to have taken place in the year A.D. 794, when Rechree was burned by the Gentiles and its shrines broken. This place is supposed to have been Raghery Island, but Rev. Dr. Reeves locates it nearer to Dublin, for he refers it to Rechree of Bregia, that is Lambay. That this descent was the work of piratical Danes, or Black pagans, is confirmed by Welsh records as well as by Irish chronicles.

After this period fresh bands of invaders continued to pour in, and about A.D. 823 several localities around Dublin and its neighbourhood were plundered, such as Swords, Duleek, Slane, Killossy near Naas, and Glendalough. Notices of these invasions are contained in the "Wars of the Gaedhill with the Gail."

Flying from an incursion of bands of pirates such as these, we can understand how the startled inhabitants of the district, young and old, rushed from their dwellings along the sea coast, and endeavoured to cross the Dodder at Donnybrook, and so get upon the main road that led to Ath Cliath, their last hope of safety; or surprised and made captive, they may have been driven there to suffer torture and death; for with the river between them and Dublin, and their captors in possession of the ford, the prisoners were altogether helpless, and at the disposal of their assailants. At all events there remains no doubt

about their subsequent fate. We can recognise the traces of the pirates' feast; the captives themselves were plundered and cruelly treated and slain; their bodies, piled together, were left in a heap to decay, and before their friends and survivors ventured to cover them with a thin layer of clay, decomposition had already advanced, and it was impossible to recognise or separate the murdered victims. I believe the Irish wolf, too, claimed his share of the prey. The rude cairn under which they lay interred must for ages have left its traditional story in the minds of the people of that district, for the place ever after remained deserted and uncultivated. Even tradition at last failed, and all remembrance of their deaths was lost; and were it not for the accidental discovery of the sword and spear, I might in all probability have never heard of the Aylesbury-road mound, or been permitted to attempt the unravelling of its eventful records. In this Paper I have related so much of the ethnological investigations as could be detailed without publishing full measurements of the crania, and other particulars that appear better suited for a separate notice. These measurements have much importance, for no discovery of similar extent of undoubted early Irish crania belonging to the tenth or eleventh centuries has ever yet been made; and I feel much indebted to Mr. Wardrop and his family for the ample opportunities afforded me during several months for investigating every circumstance connected with the mound and its contents.

The drawings to illustrate this Paper were made by Mr. T. H. Longfield, and I have to thank him for his kindness in preparing them.

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XII.—ON CERTAIN PAPERS RELATING TO LADY BELLASYSE, AND THE PRIVATE HISTORY OF JAMES II. WHEN DUKE OF YORK. By W. FRAZER, F.R.C.S.I.

[Read, November 29, 1879.]

Who was Lady Bellasyse? She was a lady who might have been Queen of England, Susan Armine, the daughter of Sir William Armine, of Osgodby, Lincolnshire; her mother was Mary Talbot, niece of the Earl of Shrewsbury. She married Henry Bellasyse, son and heir of Lord Bellasyse, and nephew of Lord Fauconberg; he was created Knight of the Bath, but appears to have been a rash, foolish man; he quarrelled with his dearest friend, Tom Porter, Groom of the Chambers to Charles II., and for a punctilio of honour they killed each other; the duel took place in Covent Garden, in 1667. His widow captivated the affections of the Duke of York, afterwards James II., and only relinquished her claim for substantial reasons, now for the first time, I believe, fully known, although part of the consideration was her receiving a peerage for life from Charles II. in 1674, when she became Baroness Bellasyse of Osgodby, having succeeded to her family estates upon the death of her parents. Ten years afterwards she was married to a gentleman named Fortrey, of whom little is known, and she survived him. Her son, Henry Bellasyse, succeeded in 1684 to his grandfather, as Lord Bellasyse of Worlaby, and died about 1690. He married Anne Bradenel, sister of the Countess of Newborough, and she afterwards married Charles Lennox, Duke of Richmond. Lady Bellasyse herself died 6th January, 1713.

Bishop Burnet, in his *History of His Own Times*, gives an interesting account of this lady, referring to whom he says:—

“The Duke [of York] was now looking for another wife. He made addresses to the Lady Bellasis, the widow of the Lord Bellasis's son. She was a zealous Protestant, though she married into a popish family. She was a woman of much life and great vivacity, but of a very small proportion of beauty, as the Duke was often observed to be led by his *amours* to objects that had no extraordinary charms. Lady Bellasis gained so much on the Duke, that he gave her a promise under his hand to marry her; and he sent Coleman to her to draw her over to popery, but in that she could not be moved. When some of her friends reproached her for admitting the Duke so freely to see her, she could not bear it, but said she could show that his addresses were honourable. When this came to the Lord Bellasis's ears, who was her father-in-law, and was a zealous papist, and knew how untractable the lady was in those matters, he gave the whole design of bringing in their religion for gone if that was not quickly broke; so he, pretending a zeal for the King and the Duke's honour,

went and told the King all he had heard. The King sent for the Duke, and told him it was too much that he had played the fool once; that was not to be done a second time, and at such an age. The lady was also so threatened that she gave up the promise, but kept an attested copy of it, as she herself told me.”—See Bishop Burnet's *History of His Own Times*, p. 198, 2-volume edition.

The end of this amour was that the Duke of York at once proposed for and married the daughter of the Duke of Modena, and when the eventful June 10th, 1688, arrived, the birth-day of the long-wished-for Prince of Wales, Burnet again mentions Lady Bellasyse as being one of the two ladies present at that important event. He says: “Lord Arran sent notice to the Countess of Sunderland, so she came. The Lady Bellasis came also in time.” Many years passed, and in the latter end of the reign of Queen Anne Dean Swift, in one of his letters to Mrs. Dingley, mentions her death, and that Lord Berkeley of Stratton had succeeded by her will to about £10,000, which she had left him.

Some original letters of this Lady Bellasyse and of Lord Berkeley's lately fell into my possession, and they afford us a large amount of information, quite unknown up to this time, respecting her, and, I may add, quite unsuspected; yet she was no unimportant person, and must have had a narrow escape of sitting on a royal throne as Queen of England. There are two letters written at her dictation, and signed by herself, that demonstrate beyond question that she must have retained to an advanced period of life all the cleverness and shrewdness she is stated to have possessed thirty-four years previously, when she captivated the affections of the Royal Duke, and obtained from him a written promise of marriage. They also demonstrate beyond question that this clear-headed widow was not unmindful of her own interests, and made right good terms with James, securing for herself no less than £2000 a-year, charged upon the Irish estates he possessed, and that she continued to draw her princely fortune to the end of her long life. As citizens of Dublin, this annuity has additional interest for us, for we find she had for paymasters well-known Dublin people, namely, Mr. Chaigneau and Sir John Rogerson. Sir John was Lord Mayor in the year 1693, and his name is still recorded by Sir John Rogerson's-quay. These worthy people appear to have regarded Lady Bellasyse and her recurring payments in a different light from that in which she viewed them, and to have felt unreasonable annoyance at the tenacity of life of the old lady, who managed to draw her very handsome allowance from the Irish estates of James all through the reigns of William III. and Anne, whilst it is more than doubtful whether James was able to obtain the least aid or assistance for himself from these same estates all the years he lived at St. Germaine, a pensioner on the King of France.

The following *verbatim* copy of a letter, dated November 11, 1712, and signed by Lady Bellasyse, which I exhibit to the Members of the Royal Irish Academy, appears to me to possess most interest.

The second letter, dated August 16, 1712, relates to the same circumstances, but gives less particulars, and is not so important or full of details.

“ KENSINGTON, *Novemb<sup>r</sup> ye 11<sup>th</sup>*, 1712.

“ MR. REDING,

“ My Lady Bellasyse did hope that before this time she should have sent you an answer in full to your letter and instructions how to proceed against S<sup>r</sup> John Rogerson. She and all the world must owne he is an original. My Lady saw M<sup>r</sup>. Whichet before his going to Ireland, and she was to have seen him y<sup>e</sup> next day by appointment, but her not being well prevented it, in order to have had my Lord Whorton and some other hands, to her being alive, and being the very Lady Bellasyse to whom the Duke of York granted at ant charge of 2000 pound a year out of his private estate in Ireland.

“ She supposes that the inclosed, which she sends you, will be usefull, and have the same effect. My Lord Marlborough and my Lord Berkeley being of her acquaintance at that time, and they both did her the favour to come to Kensington, to her house. Her Lady<sup>p</sup> indisposition has turned to a fit of ye gout, upon which they wished her joy, and her lady<sup>p</sup> says you may doe ye same to S<sup>r</sup> John Rogerson, and tell him from her that her physician gives her great hopes she may live 20 or 30 year longer. Her lady<sup>p</sup> would have you wait upon M<sup>r</sup>. Whichet, and if he thinks it of consequence to have it attested by any more, her lady<sup>p</sup> can, with very little trouble, send him a scrowl as long as from here to Chearin Cross. After you have waited of M<sup>r</sup>. Whichet, you will be able to Inform her in what manner he thinks it propper to proceed in her concerns, and her lady<sup>p</sup> leaves it to him and to you to pitch upon ye propper person of them you have named to employ.

“ If the exchange continue low and that you have any money in your hands, her lady<sup>p</sup> desires you will send it over.

“ BELLASYSE.

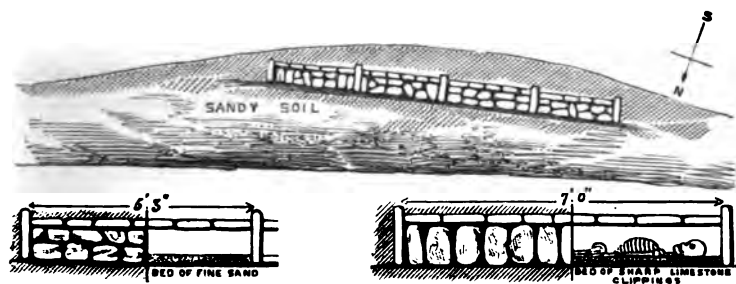
“ For MR. DAVID REDING,

“ *To be left at the Post House in Ireland.*”

XIII.—SOME PARTICULARS RELATIVE TO THE FINDING OF HUMAN REMAINS IN THE NEIGHBOURHOOD OF DUNDALK. By GEORGE ALLMAN ARMSTRONG, C.E.

[Read, June 28, 1880.]

THE locality of the discovery is a field close to the Dundalk station of the Great Northern Railway, in the townland of Cambrickville, formerly belonging to Lord Roden, now purchased by the Company for railway purposes. The field is situated in an angle dividing the townlands of Mounthamilton and Fairhill. It is in shape a tumulus, of a gravelly nature, and the graves are situated at an average depth of two feet from surface.



Whilst excavating, the hill showed unquestionable signs of having been artificially constructed in many places.

The graves lie at an average depth of two feet below the surface; they are curiously constructed, the sides being, generally, formed of round stones placed in the shape of a coffin, about 18 inches high, and covered over with large flat stones, one of the latter being placed at the head and foot in each case, in order to separate each from the one adjacent. For four or five inches over these flat slabs is spread a layer of fine shaly chippings, the same being carefully wedged and packed round each coffin, if it may so be called. On removing the slabs with care, the skeleton may be seen (*always* heading in the same direction east and west), lying upon a three or four inch layer of fine, sharp sand, and in very few instances has the supervening earth made its way in.

From several measurements made on the ground, the average length of the skeletons (before being disturbed) was four feet nine inches, and the coffin or grave five feet three inches. The two latest opened graves were much larger, and of the following dimensions:—seven feet long, two feet broad (at largest), and the skeleton six feet

four inches; the skull was in good preservation, but the skeleton fell to pieces on being moved.

This and two others of slightly smaller dimensions differed from the rest: the sides of the graves were composed of fine, well-fitting slabs, and the top better closed than any of the others; the skeletons, quite free from any extraneous *debris*, lay on a bed of fine, *sharp* black limestone chippings; altogether, these three showed much more care in their construction than the others, and this superiority in finish was generally noticed whenever a skeleton of larger size than usual was exposed.

The skeletons seemed to me to be of great age, many being very porous, and resembling a dry clay pipe when touched with the tongue. I have preserved two fair specimens of skulls and other bones, the former being the only ones out of seventy having the lower jaw preserved.

I have made careful inquiries amongst the inhabitants of the neighbourhood, and not one among the oldest has ever heard any rumour of the existence of a burying ground in the locality.

Careful search has been made for any weapons, inscriptions, &c., but as yet without success; but they may yet be found, as the graves are being opened out during the course of the excavation at the rate of about ten a-day.

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XIV.—ON A SUBMARINE CRANNOG DISCOVERED BY R. J. USSHER, AT ARDMORE, CO. WATERFORD. By R. J. USSHER and G. H. KINAHAN. (With Plate I., and a Woodcut.)

[Read, November 29, 1879.]

SUBMARINE peats are not uncommon off many parts of the coast of Ireland; but, as pointed out in the *Geology of Ireland*,<sup>1</sup> no human relics have been hitherto recorded from them, and such accumulations have only been examined by small excavations or borings, while vast extents have been left unexplored. The discovery of a crannog in submarine peat is therefore fraught with considerable interest. However, that man existed before the last subsidence of the land was proved by the ancient habitations and structures found by the Rev. W. Kilbride on Aranmore Island, Galway Bay. These extend from above high-water mark down to below the level of low-water of spring tides.

O'Flanagan, in his work on the Blackwater, dated 1844, mentions the peat and submerged forest on the Youghal strand, where, as he states, trees of immense size had been dug up, especially hazel trees, with nuts and leaves. He adds:—"The horns of the Irish elk and bones of other animals have been dug up among the trees on this part of the strand." . . . "Old people state that within their recollection the remains of some buildings might be seen under the water when the tide was very low." The latter quotation may refer to something similar to the structure which forms the subject of this Paper.

In the valley of Ardmore, and traversed by a small stream, there is a narrow but deepish strip of peat, which fills the hollow north of the village, and extends out to, and probably below, low-water mark. This is crossed by a breadth of shingle-beach (lying on the peat) which carries the present road to Dungarvan. The portion of the peat-bed outside this beach was in former years cut for turf; and various implements, besides the horns of red deer and other animal remains, are reported to have been found there from time to time. Of late years the turf-cutting has been forbidden, as it was supposed to facilitate the inroads of the sea. At the north of the bay there is a somewhat similar accumulation of peat.

To whatever cause the denudation may be due, a great mass of shingle, which some years ago formed the beach near the village, has been gradually carried away, and in the peat beneath where it lay were observed numerous piles to which our attention was directed last summer. On examination it was evident that they were the remains of one of our Irish crannogs or lake dwellings. Subsequent exploration showed that the crannog was different from most others, having been built on a considerable thickness of peat, as

<sup>1</sup> *Manual of the Geology of Ireland*, by G. H. Kinahan, chap. xv. p. 264.

some of the excavations proved, nine feet in thickness of undisturbed peat, into which the main oak piles extended for depths of from one to four feet, while the remains of the hazel (?) stakes or wattles that formed the walls of the huts or habitations were only a few inches long. This proves that only the bare foundations of the structure now remain; all the habitations, and even a considerable thickness of peat under them, especially to the north-eastward, having been removed by the action of the sea. From the survey of the crannog we found that it had been inclosed by two not very regular ovals of oak piles (some of which were split); the piles of the outer oval, which are closer together and much more numerous than those of the inner, slope outwards, and those of the inner oval generally slope slightly inwards; the interior was divided into numerous compartments.

On the northern side only three piles could be found, one belonging to the inner oval and the other two to the outer. The reason for this, and for the paucity of stakes dividing this quarter of the crannog, may be accounted for by referring to the cross section, where it will be seen from the present surface of the ground that the sea denudation must have cut out all the piles and stakes to the eastward, except those of unusual length. To the N. E. the denudation has been even greater; and here we now find at the surface many roots of bog timber similar to those which, near the centre of the crannog, are more than two feet below the surface of the solid peat. The inner encircling line of piling seems to have been wattled, as represented in the upper or ideal portion of the cross section.

We dug up several of the oak piles as well as of the smaller hazel stakes, and found that they were all more or less pointed (some of them very imperfectly), as though by a hatchet; the cuts are clean, but not more regular than those elsewhere made by stone or bronze implements. Near the centre of the crannog there were standing in the peat what on digging them up proved to be two split planks of oak in close juxtaposition, over three feet long and about two inches thick, and evenly split. Their upper ends had been worn off from exposure, but their lower ends (which were not far below the surface of the peat) were cut off square. These planks stood just within what appears to have been a circular wattle wall about 26 feet in diameter. This circle, now imperfect to the north-eastward, is to the west of the centre of the crannog. The greatest diameter of the crannog is from 92 to 100 feet. It is known from the explorations made in other crannogs that the huts or habitations on such structures were formed with wattle walls, sometimes single, but often double; in the latter case the space between being stuffed with peat; and such seem to have been the structures on the crannog at present under consideration. Many of the huts seem to have been oval or circular; but the lines of stakes are so numerous and intricate that it is hard to follow them out; and they would suggest that two or more sets of buildings may have been successively erected; the later ones perhaps to replace former ones destroyed by fire or by a hostile people.

In support of this suggestion it may be pointed out that some of these lines of stakes appear to have been driven alongside round beams of fir which evidently had been placed long prior to the time when the other lines of stakes had been driven. Furthermore, the points of certain stakes supposed to be older are perfect, while sometimes the points of the supposed newer ones are crushed up; as if in the driving they had encountered a substance harder than the peat.

The excavations were unsatisfactory. In an east and west section scarcely anything was found but solid *undisturbed* peat, except on the east, at the outside oval of piles, where charcoal occurred at a depth of two feet from the surface. This charcoal layer was followed, but without any favourable results.

The section here was as follows:—

*Section inside east margin of Crannog.*

|   | Feet.     |
|---|-----------|
| 8. Peat,  | 1·0       |
| 7. Thin stratum of bluish clay, with worn pebbles,                                      |           |
| 6. Peat,  | 1·0       |
| 5. Thin stratum of bluish clay, with worn pebbles<br>and an angular piece of limestone, |           |
| 4. Thin stratum of charcoal,  |           |
| 3. Peat,  | 2·0       |
| 2. Clayey peat,   | 3·0       |
| 1. Very clayey peat, full of small oak roots,   | 0·5       |
|   | <hr/> 7·5 |

In the peat, Nos. 1, 2, and 3, roots and twigs of oak occurred, and in the peat, Nos. 6 and 8, many boughs and twigs of oak, also stouter pieces of willow.



The accompanying cross section was taken along the line AB on plan. On it are shown—

1st. The present surface of the ground with the oak piles and hazel stakes that penetrated into it, also the planks, beams, &c., that were found in the excavations.



2nd. The former surface of the ground, with an ideal restoration of the structures the traces of which still exist. Of these the *outer oval* seems to have been constructed of piles driven closely together (generally large, but sometimes small), whilst the *inner oval* seems to have been of piles interwoven with wattles. Between these two ovals was probably a filling of peat. The exact position and size of the central large circular hut is somewhat uncertain, as there are more stakes than are required to complete a single circle. It is possible that these may be the remains of two huts of nearly equal size which occupied successively the centre of the crannog. Against the west side of the large hut there seems to have been a liney, while to the N. W. there are stakes that may represent the site of an isolated circular hut.

The north-east denudation has left so few remains on the north-east side that we cannot tell what structures existed in that portion of the enclosure. On the plan the foundations of various structures to the south of the line of section may be traced out.

3rd. The high-water-mark of average spring tides.

It is evident that when the crannog was first erected, the sea beach must have been much further eastward than at present; while inside or to the westward of it was a considerable marsh or morass in which the crannog was constructed. Subsequently the land sunk, how much we have no data to determine, but at present the ordinary spring-tide would cover a structure over eight feet in height.

4th. Under the present surface is shown the peat and its depth, where proved; whether it deepens or grows shallow landwards (westwards) has not been determined.

The circumstances of the hazel stakes in the peat would seem to suggest that this crannog was very different from those usually found. The habitations must have been on a surface only a few feet higher than the present one, thus leaving no room for the thick massive foundations of branches, trees, stones, sods, and such like usually present. The occurrence of hazel stakes between the ovals on the western side suggests the idea that there may have been habitations or cells in the enclosing wall of the crannog on that side.

The following is a list of objects reported to have been found in former years in the Ardmore peat, but probably not within the crannog, with the names of the parties from whom this information was obtained:—

1. Antlers of red deer.—Two in possession of R. J. Ussher, believed to have been obtained at Ardmore by his father.
2. Antler of do.—A tyne obtained by the above from a fisherman, who states it was found in the peat.
3. Scapula of Irish elk?—Found in the peat by the late Mr. Edward Odell.
4. Antlers of do. reported to have been found in the peat—informant. Mr. Richard Chearully.

5. Two copper quoits (?) found in the peat between the crannog and the storm wall, circular, about eight inches in diameter, with a hole in the centre of each, and "dished," or hollow on one side, weighing about two and a half pounds each—informant, John Deacon, bailiff.
  6. A wicker structure said to have resembled a cradle; found in the peat by fishermen when digging for turf.
  7. A horse-shoe, peculiarly shaped inside to suit the frog, found in the peat; now in possession of B. J. Ussher.
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NOTE ADDED IN PRESS.

Since the reading of the above Paper, the sea has invaded and exposed some of the kitchen-midden of the crannog.—(*November, 1880.*)

**XV.—ON AN ANCIENT SETTLEMENT FOUND ABOUT TWENTY-ONE FEET BENEATH THE SURFACE OF THE PEAT IN THE COAL-BOG NEAR BOHO, CO. FERMANAGH. By THOMAS PLUNKETT. (With Plate II.)**

[Read, June 28, 1880.]

ONE of the most interesting antiquarian discoveries yet made in Fermanagh is that of the remains of an ancient settlement lately exposed in the Coal-bog near Boho, on that part of the bog attached to the townland of Kilnamadow.

On the 25th of last May I was informed that while Mr. Bothwell was cutting a floor of peat in the Coal-bog he laid bare the ends of two posts, which projected a few inches above the floor, and that they seemed to have been cut with some sort of blunt instrument.

I at once went to the place. On removing the surface for a few inches here and there, three other posts were found, all standing in a vertical position; their tops were much decayed. On digging deeper down, we found that every one of the posts bore marks of some kind of axe.

After a minute inspection, I perceived that we were standing on what was once an artificial island, oval in shape, slightly elevated in the centre, and dipping with a gentle slope on all sides, the outlines of which can still be easily traced. It is 60 yards long, and 14 yards across at its greatest width. Piles, or stakes, with rudely sharpened ends, and varying in size, are found at intervals all over this area, and rough oak planks, about the size of railway sleepers, may be seen lying in rows here and there, and generally resting on a layer of branches, the whole being covered over with a stratum of clay and stones, mingled with charcoal and ashes. It is quite manifest that this is the site of an ancient crannog, or artificial island. The surrounding depression, now filled with peat, known as the Coal-bog, and covering some scores of acres, once formed a large sheet of water. This, indeed, is the history of most of our lowland bogs. The evidence I adduce to support this hypothesis is the presence of lacustrine shells and shell marl underlying the peat.

This ancient lake was connected with the Silles River (which winds through the valley about a furlong from the bog) by a smaller stream, which sweeps round the margin of the bog at present.

My next step was to make the acquaintance of the owner of the plot of bog containing the antiquities, and ask permission to explore it. He at once acceded to my request, and also added, that he and his son would assist by cutting turf around or between the posts, according to my wishes. After securing the help necessary to carry

on the exploration, we commenced by sinking a hole, or trench, five feet deep and five feet wide, down by the side of what was evidently a hut, thus exposing the posts and framework of the side of the structure from top to bottom (Plate II., fig. 1). An oak beam, seven and a-half inches in diameter, and nine feet long, penetrated a hole that was rudely formed in each post four feet from its lower end. These holes, it would appear, were cut with a small blunt hatchet, and were formed by cutting in from each side of the post towards the centre. The holes are about eleven inches in diameter at the surface, and narrow in to a width of nine inches in the middle part of the post, and are so rudely haggled that they are neither round nor square.

One of the posts was detached, and the lower or butt-end was covered over with many oval cuts. Evidently an attempt was made to dress the end, which was very imperfectly accomplished (Plate II., fig. 2). The cuts on all the posts and stakes found were more or less concave, and I am of opinion were formed by a stone axe: owing to the bluntness and the bulged form of the sides of this instrument, the cuts made by it would necessarily have a concave surface; whereas those made by a metal axe are long, clean, flat cuts.

There was a small hole, or eye, cut in a prominent part in the butt-end of every post, and most unskilfully done. At first I was much puzzled to know their use. I then—(as the mud in which the posts were originally sunk must have been soft, as I found bosses of rushes and heath, now changed into peat, under the ends of the posts)—imagined that ropes made of the willow, or from the hides of animals, might have been stretched across from post to post, and fastened in the holes in their ends, to keep them from spreading, as the holes through which the oaken beams passed in the middle of the posts were irregularly round, and the beam also partly round; so that the posts would be likely to shift their position unless bound in this way at their base.

I subsequently changed my opinion, and I now believe they were formed for the purpose of hauling the huge trunks overland. Some of the posts measured nearly 30 inches in diameter. A rope made of skin could be attached to the trunk through this hole, by which it may have been dragged along overland to the then lake shore by either men or animals, and towed to the island by canoes. I carefully examined the peat that filled these holes, and found no trace of anything else but peat. This strengthens my opinion relative to what the holes were designed for.

We dug a trench five feet deep and five feet wide forward in a straight line, in a north-westerly direction, towards what appeared to be the top of another dilapidated hut. We had only excavated forward about two feet from the exposed side of the hut already referred to when we had to remove the stool of a huge pine-tree, which protruded its weathered top above the surface (Plate II.

fig. 1). Before its decay it must have measured 14 feet in circumference.

This fragment, or stool, of the tree was two feet above the level of the floor of the hut; its roots penetrated down through the stratum composed of clay, stones, charcoal, ashes, &c. (this layer is represented in Fig. 1). When this stool was uprooted, chips of oak, charcoal, and kitchen-midden *debris* were found entangled in its rootlets, thus affording convincing evidence of the fact that this Irish krsal existed before the period when bog pine flourished in this locality.

Several farmers who live close to the bog told me that the oak timber which formed the huts was like that grown in upland soil, and was quite different from the ordinary black bog-oak.

Having excavated a trench 17 yards from the first hut, just as was anticipated, we struck a second one, composed of timbers much more massive than that of the first, but as rudely shaped as could possibly be.

When the peat was cautiously removed from its interior I had it sketched (Fig. 3). Its form is rectangular, measuring inside six feet nine inches by six feet three inches, and eleven feet ten inches from "out to out." Three planks were placed like railway sleepers before each end of the hut, at the level of the floor; they rested on branches of trees.

From the number of burnt fragments found on the floor, it would appear probable that the roof was demolished by fire. Fragments of oak slabs (principally the ends) were found, some with one and others with two holes cut through them near the end; these holes were from two to three inches in diameter. These planks were about 14 inches broad, and two inches thick. The height of the roof could not be accurately ascertained, but a close approximation was arrived at, owing to the fact that one of the side posts, which evidently carried the roof, was found still erect *in situ*; it was inserted into a hole in the end of one of the planks which composed the floor (Fig. 3). The upper end of this post was slightly sharpened. I found that all the ends of the planks which I believe formed the roof had holes, into one of which probably the upper end of this post was inserted; if this be correct, the interior of the hut could not have been more than a little over four feet high.

The framework of this structure consisted of four posts of oak, some of them measuring nearly 30 inches in diameter; they reached down into the ancient lake-mud. Their tops were decayed down to within 16 inches or so of the floor. A horizontal oak beam, as in the former hut, passed through each pair of posts. Oak planks, six and a-half feet long, stretched across from side to side, supported at each side by the oak beams, so that the whole resembled somewhat a common wooden bedstead, minus the cross-bars of wood which bind the two sides together at head and foot.

Two large logs, or trunks, of oak trees rested horizontally against

the outside of the posts at each side of the hut, the under surface of the lower ones being nearly at the level of the floor. They were not fastened to the posts of the hut in any way, but simply resting against them, and one laid on the top of the other (see fig. 3). The ends of the huts, it would appear, were not built up with wood like the sides. The occupiers may have closed the ends of the huts in a temporary way with some perishable material.

During the progress of the work two flint implements were found; one of them was very sharp, although rudely formed. Several fragments of hand-made pottery, devoid of ornamentation, were also turned up, together with a quantity of hazel nutshells, that had been cracked for the kernel. A large quantity of moss was also dug up.

Last year both the upper and lower parts of a corn rubber were found not far from the hut last explored, but they were thrown back into the hole in which they were discovered, as the finder, I was told, thought they belonged to the "little folk." I found the top portion, but failed to get the hollow counterpart. It may not have been found on the ancient site, as there is an upper layer of ashes, &c., which shows that it was occupied at a later period.

A modern dish, slightly oval, measuring 13 × 12 inches, with six feet, nearly round, the whole formed out of one piece of wood, was found about 100 yards from the huts, but at the same level. There is a similar, but five-footed, dish in the Museum of the Academy.

A flat, thinnish, oval disk of wood, measuring 14 × 11 inches, apparently forming part of a wooden vessel, was found in same place with the huts. It is now in the Academy's Museum.

I had to suspend the work, as I could not carry on the explorations further at present. The whole surface of the bog was being covered over with freshly-cut peat; but I hope to resume operations when opportunity presents itself.

All the objects already found in this place furnish evidence of its great antiquity. The structures are certainly of the rudest type possible. Neither peg nor mortice were found in the structures. No metal of any kind was found in connexion with them.

A very substantial evidence of its great antiquity consists in the fact that dark compact peat slowly accumulated over the floors of the dwellings to a depth of at least 21 feet. Twenty-one "spades deep" of turf have been removed, and each of these measured from nine to ten inches. If to this we add the "strippings" of each spit, and the levelling of the rough top of each floor of peat before cutting the turf, the whole will amount to the depth above-mentioned, and probably more.

The rate of growth of peat varies very much with the conditions under which it is formed. According to the best authorities, peat such as I have described would not, at the best, accumulate more than one inch in 15 years. Mr. Kinahan, M.R.I.A., who seems to have carefully investigated the growth of peat, would contend for

a slower rate of increase than this. It would seem, then, that we may safely calculate on an antiquity of nearly, and perhaps even more than, 4000 years for these log huts.

Another interesting fact corroborating their great antiquity is this, that the giant pine-trees which are found at various levels in this bog were not found below the "horizon," on which the settlement stands, but directly above it. We, therefore, seem entitled to conclude that pine-trees were not yet growing in this locality when the huts were built.

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XVI.—ON SOME SEPULCHRAL REMAINS FOUND AT KILLICARNEY, CO. CAVAN. By THOMAS PLUNKETT, M.R.H.A.A., Ireland.

[Read, January 12, 1880.<sup>1</sup>]

SEVERAL objects of geological and antiquarian interest have been lately exposed while making the railway between Enniskillen and Manorhamilton, to the westward of the village of Blacklion, near the road that crosses "the natural bridge" over the mountain river discharging its waters into Upper Lough Macnean, this stream being part of the boundary between the counties of Cavan and Fermanagh.

In a small tract of flat land between the road and lake, about a furlong broad, are knolls or hillocks of gravel and sandy clay; sandstone boulders are also strewn over the surface, although the underlying rock formation is entirely composed of limestone. The gravel mounds are nearly all composed of the waste of sandstone, although such rock is not found nearer than the hills, some three miles distant, from whence the stream which traverses the valley takes its rise. The boulders must have been transported by the agency of ice; and when the gravel mounds were formed, this stream would seem to have been much larger in volume, and probably covered the greater part of the valley.

The railway has been made along the valley, and during the progress of the work several of the natural mounds were cut through, laying bare interesting sections for the geologist. One mound, in the angle between the road and stream, measuring 75 feet in diameter, and 12 feet high, was selected for the purpose of ballast for the line, and whilst it was being removed it was found to be mantled over with an artificial covering of small boulders to a depth of from two to three feet. Also, towards the centre, under the boulders, a double kist was found, formed of unhewn flags, both chambers being covered by one large flag. In each chamber was a sepulchral urn, containing what appeared to be burnt human remains. The urns were elaborately covered with an indented ornamentation. A curious bone object was found in one of the chambers; a polished celt in the other. Shortly afterwards another kist, with one chamber much larger than either of the others, was laid bare on the east side of the mound; it was closely covered with a large flag, and contained a large urn, which, unfortunately fell to pieces whilst being removed. This urn stood about 15 inches high. It contained a large quantity of burnt, apparently human, remains, and was formed of the same coarse clay as the two other urns, but the ornamentation was entirely different, being in

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<sup>1</sup> A Paper on this subject had already been read by Mr. W. F. Wakeman, at the Cork Meeting of the Royal Archæological Association of Ireland.



relief, or raised, no part being incised. The raised ornament seems to have been made separately, and then attached to the urn before being burned. In the same kist with the large urn there was a beautiful flint implement, exquisitely formed, measuring a little more than two inches long, and about three-fourths of an inch broad, serrated all round the edge to the butt or bulb of percussion. Some antiquarians regard the raised style of urn ornamentation as superior in point of art to the indented, and therefore of probably later date; yet here is found a flint implement associated with the large urn with raised ornamentation, and a polished stone celt with the indented urn. The kists were formed on the surface of the natural mound, and then covered with the boulders now found over the whole surface. Probably, when the remainder of the mound is being removed, other kists may be discovered.

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[Read, May 10, 1880.]

THE Ballynamindra Cave, which forms the subject of the following pages, was discovered by Mr. Ussher in 1878, but was not explored until April, 1879, when the excavations were commenced along with Professor Leith Adams, who inspected their progress from time to time. Mr. Kinahan subsequently made a careful survey of the cave.

The cave of which we treat forms a horizontal tunnel for nearly thirty feet, which was nearly filled to the roof with strata, presenting the following general section, in descending order:—

1. The brown earth, eighteen inches to twenty-four inches in depth.
2. The grey stratum; earth and calcareous tufa, fourteen to twenty inches in depth.
3. The pale, sandy earth.
4. The crystalline stalagmite.
5. The gravel, which rested on the limestone floor.

Outside the present mouth flanking walls of rock form continuations of the sides of the cave, and indicate that it extended further out. The existing roof, for the first twenty-four feet, has an arched, worn appearance, and the left wall presents a hollow surface similar to that of the roof. On the right side was a range of swallow-holes that were concealed by the upper strata, but at a greater depth were empty; towards them water-worn crevices ran down the walls on both sides of the cave, and contained numerous relics.

#### STRATIFIED DEPOSITS.

##### I. — *The Brown Earth.*

This was the uppermost deposit. Its materials corresponded with those which form the surface outside the cave. It contained great numbers of remains (the bones being usually yellow, and in fragments) of rabbit, hare, goat, ox, fox, pig, red deer, dog, marten, horse, and hedgehog, and of several birds; the animals first in this list being the most numerously represented. We have also from the brown earth one metatarsal of bear (darker than the former bones), a number of broken bones of the Irish elk, blackened and exhibiting dendrites, as well as the fragments of a human skull (also exhibiting dendrites), and other human bones.



Everywhere in this stratum charcoal was frequent, and the following objects of human art occurred in it, viz.:—A polished celt of greenstone, flat, symmetrical, and approximately triangular; a large flat amber bead, and two carved objects of bone. A small pointed bone implement, and a piece of charred hand-made pottery, were found either in this or in the next stratum. A bone chisel and a bone knife-handle, carved with concentric circles, and marked by an iron blade, were found in crevices, but may have been of the period of the upper stratum.

## II.—*The Grey Earth and Calcareous Tufa.*

Under, but clearly defined from, the brown earth was a grey stratum, its staple consisting of earth and stones, apparently similar to the materials of the first stratum, but usually pervaded by carbonate of lime in the form known as calc tufa. This calcareous material was found permeating the earth of this stratum, in which it formed distinct whitish seams, like successive floors. From the fifteenth foot inwards it formed a hard whitish cake, resting on the crystalline stalagmite floor. This second stratum yielded most interesting relics of man and of extinct animals. The bones were usually blackened and covered with pale dendritic marks. A large proportion of them belonged to the Irish elk: these represented at least five individuals. There were numbers of fragments, but no large bone entire. The ends of the marrow-bones were always broken off, and the shafts generally split lengthways. Fragments of the antlers were found, and the small bones of the limbs and feet were numerous. Some of the bones and pieces of antler show indentations, as if they had been gnawed.

The few human bones which were found in the grey earth were blackened, but those encrusted with the calc tufa were straw-coloured. Bones of rabbits, foxes, and domestic animals were much rarer in this stratum than in the brown earth, but those of deer and hare were more numerous. Some blackened bones of bear and one of wolf were also found in the grey earth. Charcoal occurred in this stratum even more abundantly than in the brown earth; it formed a seam in the grey earth, suggesting an old floor or hearth, and detached lumps of charcoal occurred both above and below this. The only bone implement from this stratum is the worn, pointed metacarpal of a small ruminant. Rude stone implements were, however, plentiful. Worn lumps of sandstone, of shapes convenient for the hand, were found through the grey earth. These show unmistakable marks of having served for striking and cleaving with, possibly for smashing the marrow-bones; with them were found some stones, cracked and blackened by fire. A marine mussel and a limpet-shell were also procured from this stratum.

## III.—*The Pale Sandy Earth*

was of a pale brown, inclining to ochre. It passed in places into gravelly sand. This pale sandy earth enveloped and adhered to the

broken masses of stalagmite hereafter mentioned. It rested on the gravel. Near the swallow-holes were found in it an assemblage of bones of bear, similar in size to bones of the same species found in the stalagmite a few feet further in : they may have belonged to the same individual. The great majority of bones in this stratum were of a pale buff tint, like those in the stalagmite, and, like them, were heavy, highly mineralized, and very brittle. Bits of charcoal occurred occasionally ; but traces of man in this pale sandy earth appear to be few and doubtful, while the species of animals, though fewer, were all represented in the second stratum.

#### IV.—*The Crystalline Stalagmite.*

In every part of the cave this deposit, though sometimes shattered, was found, always buried under the preceding strata, and either resting on or bearing traces of the gravel beneath. From the twelfth foot inwards it extended across the cave in an unbroken floor of great thickness, from wall to wall ; but outside this limit the stalagmite was found broken up and disturbed, lying embedded in the pale sandy earth. A disconnected mass of the stalagmite floor contained, in its lower portion, next the gravel, jaws and other bones of a large bear, which appear to have been deposited in the flesh, as adjoining bones of the skeleton were found together. Near them was also embedded a metacarpal bone of deer, with characters of reindeer, and in another mass of stalagmite some teeth of red deer. This stratum contained no trace of man. The stalagmite floor rose inwards, until, at twenty-four feet from the cave's mouth, there was only an interval of from six to twelve inches between it and the roof, which interval was choked up with accumulations.

#### *The Gravel.*

This deposit, which lay directly on the limestone floor, was uniform in character, and contained no animal remains nor other relics. It was of small size, composed of rounded and subangular fragments of the old red sandstone and other rocks, but not of limestone.

#### *The Inner Cavity.*

Beyond the twenty-fourth foot from the entrance the cave loses its tunnel shape, expanding into two irregular chambers, in each of which is a great upward opening. On the bottom was the gravel, next the stalagmite floor. Upon this was tenacious clay, passing upwards into loam, which, with sandstone and limestone blocks contained in it, and a profusion of limestone rubble cemented to the roof by calc tufa, filled up the inner cavity and both its chimneys.

The earthy contents of this cavity, and the calcareous tufa, justify us, by their similarity to the materials of the first and second stratum in the outer part of the cave, in correlating them, and in supposing that the latter were derived from within. But one striking difference must be emphatically stated, viz., in no part of the inner cavity have any remains of ancient animals been found, nor any traces of man.

TABLE OF THE ANIMAL REMAINS.

|                         | Totals. | Strata. |     |      |     | Cre-<br>vices. | De-<br>bris. |
|-------------------------|---------|---------|-----|------|-----|----------------|--------------|
|                         |         | I.      | II. | III. | IV. |                |              |
| Grisly bear, . . . . .  | 102     | 1       | 7   | 43   | 43  | 6              | 2            |
| Irish elk, . . . . .    | 211     | 33      | 122 | 1    | —   | 33             | 22           |
| Red deer, or Reindeer,  | 82      | 20      | 45  | 1    | 4   | 8              | 4            |
| Pig, . . . . .          | 53      | 23      | 19  | 5    | —   | 3              | 3            |
| Ox, . . . . .           | 85      | 74      | 7   | 1    | —   | —              | 3            |
| Goat, or sheep, . . . . | 95      | 80      | 5   | —    | —   | —              | 10           |
| Horse, . . . . .        | 4       | 4       | —   | —    | —   | —              | —            |
| Wolf, . . . . .         | 3       | —       | 1   | 1    | —   | 1              | —            |
| Fox, . . . . .          | 53      | 49      | 4   | —    | —   | —              | —            |
| Dog, . . . . .          | 16      | 16      | —   | —    | —   | —              | —            |
| Badger, . . . . .       | 1       | —       | 1   | —    | —   | —              | —            |
| Marten, . . . . .       | 8       | 7       | 1   | —    | —   | —              | —            |
| Hedgehog, . . . . .     | 1       | 1       | —   | —    | —   | —              | —            |
| Hare, . . . . .         | 304     | 108     | 133 | 23   | —   | 29             | 11           |
| Rabbit, . . . . .       | 178     | 165     | 8   | 1    | —   | 1              | 3            |
| Man, . . . . .          | 36      | 19      | 12  | 1?   | —   | 1              | 3            |
| Insectivora, . . . . .  | 1       | —       | —   | —    | —   | —              | —            |
| Carnivora, . . . . .    | 183     | —       | —   | —    | —   | —              | —            |
| Rodentia, . . . . .     | 482     | —       | —   | —    | —   | —              | —            |
| Ungulata, . . . . .     | 530     | —       | —   | —    | —   | —              | —            |
| Grand total, . . . . .  | 1232    |         |     |      |     |                |              |

NOTES ON THE ANIMAL REMAINS. By A. LEITH ADAMS, F.R.S.,  
Professor of Natural History, Queen's College, Cork.

**MAN.**—The human bones presented precisely the same outward discolourations as those of animals with which they were associated. They represented at least two individuals.

**OX** (*Bos longifrons?*).—The remains of a small ox were, in all probability, those of the Celtic short-horn.

**RED DEER** (*Cervus elaphus*).—Bones referrible to red deer indicated an animal of rather small dimensions, and of the usual type found in the peat and the alluvial deposits. Two bones might be doubtfully claimed for reindeer.

**IRISH ELK** (*Cervus megaceros*).—This animal was by far the most numerous represented, excepting the hare and the rabbit. The remains of at least five individuals were discovered. With few exceptions, all the bones were much broken, dark-coloured, with dendritic markings, and displayed solutions of continuity in their long axes. Some displayed traces of gnawing.

**BEAR** (*Ursus ferox*).—The bears' remains showed the owners to have been large individuals, and of the species represented by the grisly bear.

*Inferences from the Facts discovered.*

The history of Ballynamindra Cave appears to be divisible into the following Periods:—

**First Period.**—Formation of the rock cavity through aqueous agency, and deposition of the gravel by a tranquil stream.

**Second Period.**—The cave ceases to be a river-channel, is inhabited by bears, and the stalagmite floor is formed on the gravel, entombing the bones of the bears and their prey.

**Third Period.**—The stalagmite floor becomes partially broken up, and the pale sandy earth is intruded, enveloping the broken stalagmite and various animal remains.

**Fourth Period.**—Accumulation of earth, accompanied by the deposition of the calc tufa. The cave inhabited by men who were contemporaneous with the Irish elk, and occasionally by bears.

That the deposition of the two upper earthy strata was gradual and successive is clearly shown by the layers of calc tufa formed one above another in the grey earth, and by the subsequent cessation of that calcareous material in the brown earth that overlaid it. This is corroborated by the sequence of the animal remains in the grey earth, and in the brown earth, as well as by the dissimilar colouring of the bones, the Irish elk being the characteristic animal of the former stratum, while domestic animals were most plentiful in the latter.

These facts show that the human remains, implements, and charcoal-bed, found with the remains of Irish elk in the grey earth, were

deposited there contemporaneously with them. The charcoal and calcareous seams mark successive floors during the slow accumulation of a refuse-heap, during which man was the chief occupant of the cave. The condition of the larger bones, especially of those of the Irish elk, is an additional proof of the human occupation of the cavity at a time when those animals lived; and the chipped hammer-stones found in the same stratum were, in all probability, the very tools whereby those bones were broken and split along their length, for their marrow.

The intrusion of the animal and human relics through the roof-openings of the inner cavity is negatived by the fact that, throughout its accumulations, no ancient exuviae nor implements were found.

The indentations on a few of the pieces of bone and antler may have been made by the teeth of large carnivorous quadrupeds, during the absence of the human occupants; but the antlers of the Irish elk could hardly have been introduced by any other agency than that of man.

It has been suggested that the Irish elk's bones may have been brought in, after the extinction of that species, in a fossil state; but it has not been shown that the cave-men could have had any sufficient reason for bringing in and breaking up so large a number, nor why so many of the small bones of carpus and tarsus and phalanges were brought into the cave, which can only be accounted for by the limbs having been brought there in the flesh. How the fragments of human bones got mixed with the stone implements and animal remains we do not at present venture to suggest.

*Fifth Period.*—Calcareous deposits cease. The inhabitants use carved bone implements and polished celts. The Irish elk and bear disappear, giving place to domesticated races of animals.

XVIII.—ON A MODEL OF A HUMAN FACE FROM AN ISLAND OFF THE EAST COAST OF NEW GUINEA. (With Plate III.). By P. S. ABRAHAM, M. A., B. Sc., Fellow and Curator of the Museum, Royal College of Surgeons in Ireland.

[Read, January 10, 1881].

IN a recent number of the *Journal of Anatomy and Physiology*<sup>1</sup> Professor Turner described two "masks" formed from human facial bones, which had come from New Ireland or New Britain, islands lying to the north-east of New Guinea. These peculiar fabrications do not appear to be unknown to travellers in those parts; yet, as Professor Turner observes, they had not been previously described, nor indeed scarcely alluded to; and as I have been unable to discover anything of the kind in the ethnological collections of the British and of some other Museums recently visited by me, I am led to publish this note on the specimen (Pl. III.) which is now in my care at the Museum of the Royal College of Surgeons in Ireland. Together with a Papuan and an Australian skull, it was presented to the Museum by Staff Surgeon Keelan, R. N., and was shown by me in December, 1879, at a meeting of the Dublin Biological Club. As in Professor Turner's smaller example, which resembles the present one in most respects, the frontal, ethmoid, and all the facial bones take part in the formation, as well as the greater part of the sphenoid. The separation of the bones from the rest of the cranium has been effected along a plane passing through the coronal suture, across the zygomata, through the greater wings of the sphenoid, and through the body of the latter near to its place of union with the occipital bone. The inferior maxilla is firmly fixed, approximately *in situ*, posteriorly by means of threads passed several times round each ramus at the neck, and apparently around the malar, through the orbit, and anteriorly, half way between the angle and the symphysis, by other threads bound to pieces of wood, which are securely tied above and behind, probably to the palate bones, from which they come down obliquely to the jaw-bone. The condyles and coronal processes of the jaw are entire; but the latter are almost entirely hidden by the cement composition which has been used to model the face, and to fill in the orbits as well as the floor and back of the mouth. The cement substance was supposed to consist of "chuman" or Madrepore lime, but as it does not effervesce with acid, on ignition turns from its brown colour to black, burns with flame, and leaves a copious ash—it is probably a mixture of clay with some resinous material. None of it is upon the forehead or upon the chin. The eyebrows are represented by a sharp rim, modelled upon the superior margins of the orbits; the nose, which is very short, possesses a

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<sup>1</sup> Vol. XIV., page 475, Plate XXX.

longitudinal ridge, but without any attempt at a bridge; its tip is blunt and rounded, and situated high up; the septum elongated, prominent and rather thick; and the nares are large and wide, and look more forwards than downwards. The dimensions of this curious representation of a nasal organ are:—Extreme length from the “nasion,” or “nasal point,” to lowest part of septum, 53 mm.; from centre of blunt apex to bottom of septum, 23 mm.; greatest width across nares, 34 mm.; thickness of septum, 5 mm. There is no attempt to fashion lips, the dental alveoli, which are partially filled up and blackened, being quite superficial. The teeth have been all extracted; and, as the alveolar margins of the upper and lower jaws have not been brought into contact, the mouth has the appearance of being partly open. The eyeballs are constructed out of dark-green opercula, painted white around the margin so as to leave transversely oval pupils.

Although much cracked across and rubbed, enough of the ornamentation of the face remains to show that it has been very elaborate. The whole surface seems to have been first smeared with white lime, and then to have had the colouring so laid on as to produce a symmetrically alternating pattern. Over the orbits are broad sub-triangular, or rather semi-crescentic, patches meeting above in the middle line, the right one red, the left black; the eyebrows themselves seem to have been the right black and the left red. Within the orbits a red line encircles the right, a black the left eye; below, occupying the front of each cheek, are the remains of a large triangular patch, black on the right side, and red on the left. Red and black patches, right and left respectively, are upon the chin; and beneath these again are narrow black and red lines. The nose shows traces of having been red.

The decoration is completed by a light-brown beard, formed of some vegetable fibre, 3 to 4 cm. long, arranged in a row of close tufts, standing out radially from the lower part of the face; and by a head-dress formed of white grebe feathers, and extending upwards from the beard around the face. As may be inferred from this description, the pantaloan-like *tout-ensemble* of the specimen is very striking.

It appears that this parti-colouration, and use of the three colours red, black, and white, is not considered unfashionable amongst the more æsthetically inclined natives of New Guinea and the neighbouring islands. Thus, according to Dr. Comrie (“*Anthropological Notes on New Guinea*,”—*Journ. of Anthropol. Inst.*), some of the inhabitants have ordinarily their faces decorated by a few streaks of red and white paint. Again, Mr. Moseley says, in his interesting Paper on the inhabitants of the Admiralty Islands:—“The male natives occasionally had their chests and faces reddened with a burnt red clay. Sometimes one lateral half of the face is reddened, the other being left uncoloured. When vermilion was given to the natives, they put it on cleverly and symmetrically in curved lines leading from the nose under each eye, showing that they understood how to use it with effect. No doubt they paint themselves elaborately on festive occasions, in war, &c. They were fond of being painted, and two natives who were painted

on board all over with engine-room oil-paint, yellow and green, in stripes and various facetious designs, were delighted." Mr. Moseley further says that "the skulls of turtles suspended in the temples are ornamented with patterns painted in those usual colours. The human skulls are likewise decorated, and some have eyes of pearl-shell inserted into the orbits on a background of black clay."

It is not clear whether it is their friends or their fallen enemies who are thus decorated by the Melanesians. It seems rather unlikely that an enemy's face should be beautified in the highest style of the prevailing art; moreover, I have been recently informed by a medical man who has travelled in those parts, that these representations of the human countenance are held in the greatest respect. I am therefore inclined to the belief that it is in this manner that the memory of distinguished friends is perpetuated.

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## DESCRIPTION OF PLATE.

### PLATE III.

**Model of a Human Face, from an Island near the Eastern Coast of New Guinea.**



**XIX.**—ON A COLLECTION OF CRANIA AND OTHER OBJECTS OF ETHNOLOGICAL INTEREST, FROM THE SOUTH-WEST COAST OF AFRICA. (With Plates IV. and V.). By P. S. ABRAHAM, M. A., B.Sc., F.R.C.S., &c.; Curator of the Museum, Royal College of Surgeons in Ireland.

[Read, February 28, 1881.]

THE interesting collection which I have the honour of laying before the Royal Irish Academy this evening was made by Dr. Wm. Allan, Assistant-Surgeon in the Colonial Service, in the course of the year 1880; and was recently presented by him to the Museum of the Royal College of Surgeons in Ireland. As will be seen directly, many of the specimens are of interest as illustrating the stage at which the natives of South-western Africa have arrived in practical arts and manufactures. It is, however, especially to the crania that I wish to direct attention; for they seem to me to present certain characters which sharply differentiate them from the generality of negro skulls, and to be, therefore, of considerable importance from an anthropological point of view. I propose to commence with the consideration of these skulls, and, after giving the scanty history which I possess as to the tribe to which they belong, &c., I shall enumerate a few of their more important craniometric indices and measurements, and shall then compare them with skulls of average negro type. Five of the specimens, viz., those marked A, B, C, D, E, once formed part of the mechanism of natives of the Cabenda district, which is situated to the north of the mouth of the River Congo. The specimen F belonged to a member of the Congo tribe; and, as will shortly be seen, differs in a marked manner from the Cabenda crania.

As far as I am aware, there are no skulls of Cabenda negroes in the three principal British Collections, viz., in that of the Army Medical Department at Netley, in the Hunterian Museum, or in the late Dr. Bernard Davis' Collection, which is now also at the Royal College of Surgeons in London.<sup>1</sup>

A and B belonged to males of adult age; C is also the cranium of an adult male, probably of the same tribe; D is the calvaria of a Cabenda woman, to judge from its general configuration, and from the small development of the muscular ridges and processes; E is the calvaria of a male, most likely of the same district; and F is the cranium of a Congo man, approximately of middle age. It is most unfortunate

<sup>1</sup> According to Dr. Allan, the Cabendas are the most intelligent negroes to be found along the coast, and are much preferred as servants by the European settlers. Their physical and mental superiority was alluded to by Mr. Winwood Reade in his work on "Savage Africa," in which he mentions the fact that they, together with "Krumen," were seldom taken as slaves, when that commodity was a staple one on the West Coast. Dr. Allan informs me that the obtaining of these bones was a matter of some difficulty and risk, for many Africans, not unlike the natives of some more civilised countries, have a superstitious horror of meddling with the remains of their countrymen.

that none of them are complete skulls; the lower jaw being wanting in A, B, C, and F, as well as in D and E, which also lack the bones of the face. The two latter calvariæ and the cranium show signs of having been burnt; and they all show marks of having been gnawed, possibly by rats. The incisors and several of the other teeth have been in consequence lost in A, B, and C; and the alveolar margins of A and B have suffered to such an extent, that the alveolar indices for these crania can be regarded as only approximate. In the annexed Table the principal measurements and indices are given for the specimens, as far as they could be taken.\*

|    | A      | B      | C     | D    | E    | F    |
|----|--------|--------|-------|------|------|------|
| C  | 512    | 498    | 485   | 464  | 512  | 506  |
| L  | 188    | 178    | 166   | 166  | 185  | 185  |
| B  | 129    | 124    | 125   | 125  | 132  | 127  |
| Bi | 686    | 697    | 753   | 753  | 714  | 686  |
| H  | 127    | 128    | 128   | 135  | 140  | 136  |
| Hi | 676    | 719    | 771   | 813  | 757  | 735  |
| BN | 97     | 102    | 101   | 91   | 107  | 106  |
| BA | 92(?)  | 96(?)  | 104   | —    | —    | 112  |
| Δi | 948(?) | 941(?) | 1030  | —    | —    | 1057 |
| Nh | 47     | 49     | 49    | —    | —    | 46   |
| Nw | 28     | 30     | 27    | —    | —    | 30   |
| Ni | 596    | 612    | 551   | —    | —    | 652  |
| Ow | 38     | 39     | 35(?) | —    | —    | 40   |
| Oh | 33     | 35     | 35    | —    | —    | 34   |
| Oi | 868    | 897    | 1000  | —    | —    | 850  |
| Ca | 1325   | 1160   | 1105  | 1152 | 1425 | 1378 |

\* The methods of measurement adopted by Prof. Flower in his Catalogue have been here followed, and similar abbreviations used, viz.: Circumference, C;

A few other measurements may also be tabulated:—

|   | A   | B   | C   | D   | E   | F   |
|---|-----|-----|-----|-----|-----|-----|
| Breadth of face, or inter-zygomatic diameter, . } | 125 | 133 | —   | —   | —   | 128 |
| Frontal breadth, . . .                            | 111 | 106 | 115 | 110 | 117 | 112 |
| Occipital breadth, . . .                          | 107 | 104 | 99  | 89  | 100 | 105 |
| Fronto-occipital arch, .                          | 416 | 395 | 375 | 390 | 415 | 407 |
| Intermeatal arch, . . .                           | 305 | 305 | 305 | 310 | 320 | 320 |

As good average measurements as could possibly be taken to compare with the above are those published by Professor Flower in his Catalogue of the collection of the College of Surgeons in England. His figures are, for "African negroes of various tribes:—

|    |                         |            |
|----|-------------------------|------------|
| Bi | Dolicocephalic, . . . . | 736, (42)  |
| Hi | Hypsicephalic, . . . .  | 735, (42)  |
| Ai | Prognathous, . . . .    | 1044, (36) |
| Ni | Platyrrhine, . . . .    | 568, (43)  |
| Oi | Mesoseme, . . . .       | 863, (43)  |
| Ca | Mesocephalic, . . . .   | 1388, (26) |

For further comparison I may put down the average indices of three typical African crania of unknown tribes, which I have recently measured at the College of Surgeons. They are as follows:—

|           |  |
|-----------|--|
| Bi, . . . | 706, and therefore extremely dolicocephalic. |
| Hi, . . . | 746, „, hypsicephalic.                       |
| Ai, . . . | 1052, very prognathous.                      |
| Ni, . . . | 581, very platyrrhine.                       |
| Oi, . . . | 880, mesoseme.                               |

It will be seen that the two Cabenda crania A and B show considerable uniformity in all their indices; their most marked common character being the absolute absence of prognathism. Although their alveolar indices could not be accurately taken, as I have mentioned

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Length, L; Breadth, B; Breadth index = "Cephalic index", Bi; Height, H; Height index, Hi; Basi-nasal distance, BN; Basi-alveolar distance, BA; Alveolar index, Ai; Nasal height, Nh; Nasal width, Nw; Nasal index, Ni; Orbital width, Ow; Orbital height, Oh; Orbital index, Oi; Capacity of cranium, Ca.

above, there can be no doubt as to the non-protrudence of the facial bones; and we may certainly consider the index in each case to be not much over 950. Crania which have an alveolar index above 1030 are considered by anthropologists to be prognathous, between 980 and 1030 to be mesognathous, and below 980 to be orthognathous. These two crania are therefore extremely orthognathous; and, indeed, are more so than the ordinary run of European crania, for which, from the measurement of 184 examples, Professor Flower has assigned an average index of 962. The cranium C, on the other hand, shows an approach to the ordinary negro type in the development of the face; but even here the prognathism is so little marked that it may be considered to be mesognathic. There is no means of judging as to the gnathism of D and E; but from the outline of the forehead I should say it would be orthognathic in either case. In looking over the Catalogue of Professor Flower's collection, I find that the lowest alveolar index is 970, and is given for the cranium of a male native of the Gold Coast. Dr. Bernard Davis, in his *Thesaurus Craniorum*, mentions that one or two of his West African skulls are exceedingly European in form; but he gives no measurements by which we can determine their alveolar indices. Burton, Winwood Reade and others have spoken of the "beauty" of some of the African women, by which, I suppose, they mean, among other things, an approach to an orthognathic type; but until the present time I am not aware that any such European-shaped skulls have been actually brought forward and measured. This peculiar formation for negro skulls at once gives origin to a suspicion that perhaps we are considering the skulls of a mixed race; but, apart from the history, the other measurements indicate them to be veritably of negroes, with some of the racial characteristics most strongly marked. The doliocephaly, for instance, is extreme. While Professor Flower's average cephalic index for negroes is 736, the average for these specimens is only 718; and the two, A and B, which are so orthognathous, are the most doliocephalic of all, even more so than my three old negro skulls, which gave an average index of 706. Similarly, the nasal indices show that the negro character, in the respect of being platyrrhine, is extreme—the average figure given by Professor Flower for negroes being 568, while these have indices of 596, 612, and 551, respectively.

The cranial capacities, measured by means of rape-seed, are also in the first four specimens indicative of low type. In Professor Flower's estimate the negro skulls appear to be of mesocephalic capacity, the average internal contents measuring 1388 cc.; only my specimen E, which is doubtfully of the Cabenda tribe, is really mesocephalic; the others, and especially those labelled B, C, and D, are exceedingly microcephalic—in fact, exceptionally so.

Without now attempting to give a detailed description of each of these crania, I may cursorily remark upon some of the more striking of their individual peculiarities.

In A (Pl. IV., A and A α), although the sagittal and other sutures

are united, there is some tendency to scaphocephaly. At the pterion on each side the four bones, frontal, parietal, squamosal, and alisphenoid, almost meet in a point, in the way so common in the lowest races, and reminding one of the simian arrangement. The intertemporal diameter is as large as the interparietal; the nasal bones are small, unsymmetrical, and flat; and the interorbital septum is wide. There is a well-marked, almost right angle, between the floor of the inferior nares and the front of the upper jaw. The palate is comparatively small and flat, with the alveolar margin well curved; one of the fore molars on the right side has been long lost *ante mortem*; no trace remains of the basilar suture; the occipital condyles are broad, short, and flat; and the foramen magnum is elongated from before backwards.

The wide face and narrow brain-case of B (Pl. IV., fig. 8, B and B α) is very striking. In this also the septum between the orbits is extremely thick; the nasal bones are flat, and in line with the frontal; and here, again, we find the oral portion with comparatively small development, although the sides of the arch are somewhat parallel, and thus showing an approach to the lower animal form. The sutures at the pterion have the normal arrangement of higher races.

Beyond its microcephaly I need say little about the cranium C. It has been much scored by the weather, and otherwise subjected to ill-usage.

The female calvaria D has the sagittal suture in nearly complete ankylosis; in E the two parietals are completely united, leaving no trace of the suture; and in F a similar condition is commencing. In the *Thesaurus Craniorum* Dr. Bernard Davis remarks that "this premature ossification of the sutures is very frequent in African skulls;" and I have found the union in three out of the four negro skulls which are in the College of Surgeons of Dublin Museum. The specimens E and F have been subjected to the action of fire, whether accidentally or not I cannot say. The Congo cranium F (Pl. IV., fig. F) is of the typical negro type; and is noteworthy for its great prognathism, which is of the alveolar kind, that is to say, the great protrusion is in the alveolar margin; but a still more important peculiarity of this jaw is the fact that it possesses an extra true molar tooth on each side, in line with the others (fig. F, 1). Additional molars were first pointed out by Soemmering in a negro cranium which I believe is still in the Giessen Museum. Supernumerary molars in negroes are mentioned by Bernard Davis; but they are extremely rare.

The remaining pieces of the collection will, perhaps, be considered of more general interest. The peculiar implement (Pl. V., fig. α), with which we may begin, is not a musical instrument, nor a weapon, as might be supposed, but a pipe for smoking the so-called "leamba;" which, to judge from the smell which is still retained by the pipe, as well as on the authority of Du Chaillu, is simply Indian hemp, or the dried leaves of *Cannabis sativa*, which appears to be cultivated all over central Africa. Livingstone mentions it as being one of the crops

raised by the natives on the banks of the Zambesi and its tributaries, and Du Chailu and others allude to its being grown on the West coast. It is interesting to find the use of this drug, to procure exhilaration and subsequent narcotism, so widely spread in Africa as well as in Asia. Dr. Allan tells me that these "leamba" pipes are smoked by consumptives on the West coast; and, no doubt, their effect, if used in moderation, would be soothing in painful sicknesses. The bowl of this pipe is formed of a brownish clay, and is not of an out-of-the-way size, while the stem is made of an elongated large fruit, of what plant I am unable to say; it measures 55 cm. in length, and 34 cm. in circumference. In Dr. Livingstone's work on the Zambesi, a huge native tobacco pipe is figured, but in that the bowl is the largest part.

The three curious examples of native pottery may now be considered: the two larger pieces are water-coolers, and are known by the name of "maringas." Formed of a somewhat porous clay, a slight exudation of the contained water becomes possible; and from the film so formed on the exterior, evaporating in the surrounding warm currents of the atmosphere, we have a physical explanation for their cooling properties. Similar porous water-coolers are in use in most warm countries, and these recall to me the so-called "water-monkeys" of Jamaica. There is nothing remarkable in the shape of the vessel (Pl. V.  $\gamma$ ), except, perhaps, that its lines are elegant, and its contour singularly symmetrical—when we remember that in this case the potter had no lathe or other mechanical contrivances. The ornamentation is simple, and is effected by a series of fine lines round the neck and body, and by dark paint, laid on rather unevenly, in a symmetrical pattern. Together with that which I am now about to describe, it came from Loanga.

The specimen (Pl. V.  $\beta$ ) is unlike anything of the kind which I have seen described or figured. It is so fashioned that a current of air can pass, as it were, right through the mass of the liquid, the evaporation being thereby more extensive, and the cooling more rapid. It is as though two separate flasks were joined together by three tubes. Such an elaborate piece of plastic-work must require a great amount of ingenuity and skill on the part of the designer and maker. It is ornamented more elaborately, chiefly by lines and bands of the same brownish paint, and by lines and indentations in the clay itself.

The small jug (Pl. V.  $\delta$ ) is the handiwork of bushmen of South-west Africa. Low and degraded as is this race, both physically and mentally, this modest little attempt at any rate shows that even a bushman has an idea of form, and a dawning notion of art. The mark of the savage fire, in front of which it was baked, is to be seen near the handle; and around the body rough, blackened scorings form a pattern, and relieve the monotony of a uni-coloured surface. Primitive and lob-sided though the whole achievement may be, less elegant and artistic utensils are to be seen upon many a modern æsthetic wall.

Next follow two calabashes, richly ornamented with carvings, into which white chalk has been rubbed, and paint. These are commonly used for carrying water all over Africa; and Livingstone, in his work

on the Zambesi, alludes to their elaborate ornamentation. The Calabash tree is now common in the West Indies, and generally to be seen about the negro villages. Its large, hard, and durable gourd-like fruit, when ripe and dry, is an essential to the black housewife, being used for all kinds of utensils; and when young and soft, it makes an excellent pickle.

The finish and quality of the knives and spears which are on the table show that the fabricators were no mean adepts in iron work. I think it was Dr. Livingstone who, in 1864, first pointed out that the nation of Africa may, at this period, be considered to be in their "Iron age." He found the "Manganja people," who inhabit the country watered by the River Shirè, which flows into Lake Niassa, to be great workers in iron, extracting the metal from its ores and manufacturing it into excellent hoes, knives, spear heads, bracelets, &c., and some of these, as well as forges, &c., were figured by him.

Captain Burton, in 1863, described the Fans, who inhabit the interior of the South-west coast, as "cunning workers in iron, which is their wealth;" and he mentions their spears "of cruel and fantastic shape," and curious lotus-shaped knives, "with blades as broad as they are long, "as is the fashion of the Mpongwe." Other travellers in Africa have found iron-workers in other parts; and Captain Cameron, in a Paper on "The Anthropology of Africa," read before the Anthropological Institute, in 1877, gives a very interesting account of the iron-working which he saw.

The knife, marked 27, is a double-edged chopping-knife, in its wooden sheath; the blunt square apex is curious, and its breadth and lotus-like shape bear out Capt. Burton's remarks quoted above.

The weapon marked 28, like the foregoing, is of the Mpongwe tribe and of the Fans iron. A very similar one is figured by Du Chaillu as a "war knife used by the Fans," in his work on Equatorial Africa. The shape is graceful, and would, no doubt, prove a serviceable weapon in a hand-to-hand fight. The barbs, wound round with brass wire, are probably intended for ornament. The two iron imperfect circles are said by Dr. Allan to be necklets, and to be also belonging to the Mpongwe tribe.

The spears are of the Combè tribe, and come from Bata; they are well balanced for throwing. Du Chaillu figures several Fan spears, which are very similar to these; and he says that the accuracy of aim and force with which the natives cast them is surprising. The small barbs, which are just behind the blade in the longer of the two, are probably for use as well as ornament—in case the latter should snap off, to keep the shaft sticking in the flesh.

The harpoon is also of African iron, and is from the Congo river. The negroes of this part are great fishermen, and are clever with the harpoon, which they use for turtle and large fish, as well as for whales, when they get the chance.

The little basket is of the Cabenda tribe, and is a pretty little example of such work.

The grass mat is from the Gaboon. It is a rather coarse example

of the textile art; in parts of the interior, however, the natives weave fine and soft cloth out of certain kinds of grass fibre.

The two skull-caps are of grass, and come from Loanga and Sierra Leone respectively.

The cowrie belts are from Old Calabar and from Bonny. The larger is of the value equivalent to about sixpence in our money; but it would purchase a large amount of yams and other food.

The hair-pin is carved out of a hippopotamus tooth, and comes from Cape Lopez, at the mouth of the Gaboon. The belles of that country complete their coiffure by sticking one of these pins into the front of the hair, according to the figure given in Du Chaillu's book.

The ivory armlet was brought from "Grand Cess," and is one of those worn by Krumen. Mr. Winwood Reade, in his work on "Savage Africa," states that the Krumen wear bracelets of ivory as a sign that they have visited the Cameroons or the Gaboon country. In other parts of Africa distinguished ladies sometimes wear similar armlets. Thomas A. Greer Forbes, in his work on "Africa," mentions that the principal wife of a powerful Makololo chief wore a large ivory ring on the arm above each elbow—of course in addition to about a dozen brass or copper bangles on the forearm. I believe that this African fashion is now becoming prevalent in other countries.

The wooden figure on the table is an idol or "Juju," which was purchased at Loanga. It may be supposed that it was prayed to inefficaciously, and therefore sold by its worshippers. From its white colour, it probably represents an evil spirit; for although in European countries the incarnation of wickedness is commonly considered to assume a black personality, among the black races he is generally believed to be white. As regards the sex of this deity, upon anatomical grounds, I am not quite certain whether it is intended to be male or female. It is probably the latter; and we know that some of the Africans consider their evil spirits sometimes to be of the gentler sex.

The photographs are of females of Gambia. The central figure has arrived at full maturity, and the characteristic pendulous mammae of the negro mother are well seen in her case. Another point of anatomical interest shown in the photograph is her large and protrudent umbilicus. Dr. Allan found similar formations in from 5 to 10 per cent. of the natives of the South-west coast, and in many cases they are veritable umbilical herniæ. I recollect to have observed many large umbilici among the negro children of Jamaica.

When we remember that Dr. Allan got together this collection without very great difficulty, and within a few months, it is a matter for wonder and regret that his example is not more often followed, and that the alumni of our colleges and schools who travel abroad do not more often remember the museum of their Alma Mater in the way Dr. Allan has done. In conclusion, I wish to state that the collection has been in my hands but a short time, and to express my regret that several circumstances have prevented me from treating it in as exhaustive a manner as it deserves.



## DESCRIPTION OF PLATES IV. AND V.,

ILLUSTRATING DR. ABRAHAM'S PAPER ON A COLLECTION OF CRANIA  
AND OTHER OBJECTS.

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## PLATE IV.

- FIGS.  
A,           Cranium of a Cabenda Negro.  
A a,        Profile of ditto.  
B,           Cranium of another Cabenda Negro.  
B a,        Ditto in profile.  
F,           View of Upper Jaw of a Congo Negro.  
F 1,        Supernumerary Molar Teeth in ditto.

## PLATE V.

- FIGS.  
a,           Pipe for smoking "leamba," from South-West Africa.  
β and γ,   Water-coolers, or "maringas," from Loanga.  
δ,           A Bushman Jug, from South-West Africa.

## XX.—ON THE DOORWAY OF THE ROUND TOWER OF KILDARE. By SIR SAMUEL FERGUSON, LL.D.

[Read, November 8, 1880.]

A LOFTY church tower stood at Kildare in the time of Giraldus Cambrensis, who speaks of it as being then a very ancient monument. The round tower still standing there is *prima facie* the same edifice. But its doorway exhibits a kind of ornamentation which, if old in the last quarter of the twelfth century, when Giraldus wrote, would give too early a date for the supposed commencement of that style in architectural decoration called Romanesque. Dr. Petrie therefore argued, as regards the Kildare tower, that either the Romanesque style had developed itself here earlier than archæologists generally would be willing to admit, or else that the tower itself should be regarded as a new structure built since the time of Cambrensis; though this latter hypothesis rests on no authority, and receives no support from the author.

Other investigators have got over the difficulties involved in the dilemma by suggesting that the doorway is an "insertion"; and, in evidence of that view, point to appearances of newer masonry surrounding it, and spreading over a large surface between it and the ground.

I am unable to concur in this theory; and, as the reasons on both sides appear to rest on nothing definite, I have asked leave to place before the Academy the particular grounds on which, as it seems to me, this doorway should be regarded as part of the original structure.

It stands at a height of about fifteen feet from the ground, and is now accessible by a stair-ladder with a handrail leading to an external landing or balcony from which every part of the work can be satisfactorily examined.



Fig. 1.

It is what is called a "recessed" doorway of three orders or gradations of members, of which the two internal orders are perfect, and exhibit the ornamental work in question. The first or external order has disappeared, its place having been supplied by the same rough rubble masonry which shows over the rest of the newer surface. As far as concerns the doorway, it is obvious that this new masonry goes no deeper than the thickness of the first order; for it abuts against the dressed red sandstone jambs and arch of the second order which project behind it. Plainly enough there has, to that extent, been a repairing of dilapidation both of the surface of the tower and of the outer order of the doorway. But this new work exhibits no appearance of having been executed at different times, and the internal orders exhibit no appearance of ever having undergone the least disturbance, though, of course, it might be said that, consistently with present appearances, there may have been an original insertion, the external members of which may have subsequently mouldered away, and that the primary new work due to the insertion may have been overlaid and hidden from observation by the secondary work due to the repairing of that dilapidation; and, but for the further fact about to be adduced, it might be difficult to give these hypotheses, gratuitous and fanciful as they are, any other answer than that, in the absence of evidence to the contrary, the presumption is that things remain in *statu quo ante*.

The theory of an insertion of one opening in lieu of another implies, however, a process of underpinning to sustain the weight of the wall after the withdrawal of the support given by the first doorway, and a further process of removal of the incumbent masonry to a sufficient height to give head-room to the workmen employed in putting in the new arch. It has been mentioned that the new work surrounds the doorway and spreads thence downward to near the ground. But above, where the new work ought to appear, if any such operation as is suggested had ever taken place, not only is there no trace of new work beyond the few inches necessary for making up the outer rim of the first recess, but this part of the surface of the tower still carries on its face, altogether undisturbed and obviously in its original state, the old drip-stone or hood moulding for preserving the work below from the weather. It is of the gabled form, such as is used for the protection of other doorway-opes in other Irish ecclesiastical remains—Killeslin, Freshford, Clonfert, Roscrea—and is nowhere, so far as I know, employed save in connexion with arched and decorated work in the same style with the ornamentation here. Nothing can be more distinct than the evidence afforded by this member and by the surface it projects from, that the original masonry of the tower has never been disturbed over the crown of the present doorway arch beyond the shallow rim of external rubble-work above described.

Dr. Petrie has not gone into this question of "insertion" farther than by noticing the suggestion as gratuitous, and appealing to the evidence of the monument itself. He has, however, carefully shown

the new work over the external jambs and over the head of the outer arch in his drawing of the doorway, reproduced from the Academy's *Transactions* (vol. xx., p. 208) above.

I am able in one detail to make a slight correction in Petrie's enlarged drawing of one of the details. He has shown the capitals of the inner pilasters as consisting of a double arcade with contained stems and foliage. He may easily be excused for failing to make out the lines of a surface so abraded, and in a position so difficult for observation. I present a cast, from which it will be seen that the design is somewhat different. The forms which he regarded as semicircular

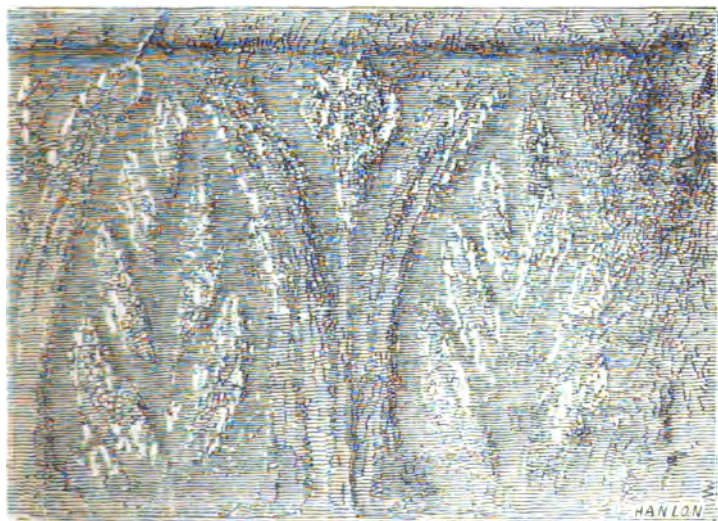


Fig. 2.

appear here as of Gothic design; but they seem to be parts of a floral rather than an architectural composition. A flower on a stem rises between the arcades, giving something of the effect of the honeysuckle ornament. I also present another cast, showing the entire accuracy of his drawing as regards the decoration of the soffite.

On the resulting question, whether the whole tower be not of a date posterior to the time of Cambrensis, I content myself with observing, that of the other works with which its gabled canopy connects it, some are known to be older, and none to be later, than that epoch.

**XXI.—A DESCRIPTION OF A HIMYARITIC SEAL ENGRAVED ON SARD, AND ON A SMALL COLLECTION OF BABYLONIAN INSCRIBED CYLINDERS.**  
By W. FRAZER, F.R.C.S.I., M.R.I.A.

[Read, May 23, 1881.]

ABOUT a year since a small collection of early engraved seals chanced to come into my possession, amongst which those that possessed the chief interest were seven inscribed seal cylinders of Babylonian type; and a Himyaritic seal, with an inscription engraved upon sard; I also obtained a Phœnicio-Assyrian seal made of ivory, and several others engraved on different kinds of gems, referable to various periods of early classical history, and affording examples of Sassanian, Greek, Roman, and Phœnician workmanship; but all of less importance than those I desire to place on record in this communication.

It was impossible to obtain any reliable information regarding the places where these seals were procured, or the circumstances under which the collection was formed; but from the character of the objects themselves, and from a collection of gold and silver coins that were associated with them, I should conjecture that they were obtained during an extensive tour in the East, extending through Asia Minor, Persia, and probably along the Euphrates, for I got concave aurei of the Later Roman Empire, struck by Alexius I. and Johannes II., of the Comneni family; five tetradrachms of the Seleucidæ; several Parthian coins; a large silver medallion, or coin, of Sultan Hussin Ben Soleiman, of Persia; and especially two very rare silver coins of Timur the Tartar, not contained in our great public collection, and probably undescribed.

The Babylonian seal cylinders were, as I have stated, seven in number, and six of these were carved from massive iron peroxide, or native hæmatite. They all presented incised sunken figures of deities, with various symbolic objects, and priests, or religious worshippers, probably some representing the former owners of the seals, and all without accompanying inscriptions. The seventh of the seal cylinders I was specially interested about, for it contained four lines of inscription in the well-known Babylonian characters, and with them the figure of a deity and of his attendant worshipper, all well preserved, being cut upon a piece of almost translucent pale gray agate. I was anxious to ascertain what this inscription was intended to record, and availed myself of the kindness of Rev. A. H. Sayce, of Queen's College, Oxford, to decipher its meaning. He took the trouble of examining all the seals for me, and of writing a full and clear account of the different objects they represent, and to the communications he sent me we are indebted for all the information which this Paper may contain. I need not say how deeply I feel obliged to him for his kindness in this matter.

No. 1.—A hæmatite cylinder, measuring 16 millimetres in length. It represents a priest, with an altar behind, and a deity (apparently

Rimmon, or the Air God) in front, with a winged dragon by way of ornament.

No. 2.—Also composed of hæmatite, measuring 16 millimetres in length. A rude-cut seal, resembling those which are obtained from Cyprus, from which island Rev. Mr. Sayce considers it possibly came. Owing to its rude cutting, and its being much worn, it is difficult to recognize what subjects it was intended to represent.

No. 3.—An archaic hæmatite seal of large size, which measures 26 millimetres in length. It represents several composite monsters, amongst them Hea-bani, the satyr (with human head and bull's legs), who holds the hands of the hero Isdhubar. Isdhubar is struggling with a monster, behind whom a horse(?) stands. There is next a group of two monsters, which Mr. Sayce does not explain. The figures on this seal are well cut, and it affords a good example of the advanced state of art in the country and at the period it was made.



Fig. 1.

No. 4.—Another brown hæmatite cylinder of archaic type. It is the smallest-sized cylinder in the collection, and measures only 15 millimetres in length. The image of the first owner of the seal is on the left, and a priest on the right of the ornaments, composed of a star and flower, of the Goddess Istar (Astarte). An image of the goddess herself is noticed in the middle. Under the form of the image here represented Istar was called Hana in Babylon, and is identified by the Greeks with their deity Artemis.

No. 5.—Likewise composed of brown hæmatite. This cylinder measures 22 millimetres in length. It represents the image of the goddess Istar, accompanied by two attendant priests, and also a representation of the owner of the seal.

No. 6.—This cylinder has undergone little wear or rubbing, and is still in an unusually well-preserved condition. It is likewise made from brown hæmatite, and measures 29 millimetres in length. It represents a deity, probably Merodach, with his symbol, a human head, below. The owner of the seal is paying due worship in front. Behind is a lizard, the object of which Mr. Sayce says he does not know. Behind him again is a twin deity on a pedestal, and Mr. Sayce states he is not aware whom this figure is intended for.

No. 7.—Is the cylinder engraved on gray agate, already mentioned as having four lines of Babylonian inscription. It measures 29 millimetres in length, and is in good preservation, as might be expected from the hardness of the stone it is composed of. The engraving on



Fig. 2.

it shows the high state of art at the time it was made. Mr. Sayce refers this seal probably to the time of Nebuchadnezzar. It represents the goddess Ishtar, with a worshipper standing in front, and the inscription reads as follows :—

1. GU AN Canu-Khi, probably to be read Panu-Canu Khi.
2. The son of Akhi-Dur-Kibbar.
3. The image of the god of the planet Jupiter (Merodach), literally "The Bull of the Sun."
4. And the god Sakni.

Mr. Sayce kindly examined for me the other seals in this collection, and I would select from them, as deserving of special observation, the Himyaritic seal, engraved on sard, of which I have already made mention.

The inscription of this seal has been deciphered as follows:—L'·A·DH·B·N,—the translation being "belonging to Adhban," that is, "to the wise man." It is a matter of interest to find, after so many centuries and changes, social and political, the name of this philosopher preserved on his signet ring, as fresh almost as when he wore it and used it in his daily occupations.



Fig. 3.

XXII.—THE ABBEY OF FAHAN. By WILLIAM J. DOHERTY, C.E.,  
M.R.I.A.

[Read, February 28, 1881.]

THE site of the ancient abbey founded by Saint Mura in the sixth century, and known in the Irish annals by the names of Fathen-Mura, Othain-Mura, Fathen-Mura-Othna, &c., is to be seen about eight miles north of the city of Derry, in the parish of Upper Fathan, in the barony of Inis-owen, Co. Donegal.

Adjoining, to the east, the main road leading from Derry to Buncrana, the abbey nestles in the "Bosom of Fahan,"<sup>1</sup> one of Ireland's most charming vales. North, west, and east, are seen the lofty peaks of the Donegal mountains; beneath, the blue-tinted waters of Lough Swilly<sup>2</sup> receive the shadows of the surrounding hills, and glint and gleam in the sunlight; while to the south rises in solemn grandeur the most storied hill of Ulster—the Grianan of Aileach. To become conversant with the facts associated with this name, it will be necessary to travel back into the records of our earliest Christian history.

The results of the personal researches of the late John O'Donovan, LL.D., into the history and antiquities of the Co. Donegal, made during a visit in the autumn of 1835, are embodied in a series of antiquarian letters, the series of which form one of the treasures of the Library of the Royal Irish Academy. In one of these letters, Dr. O'Donovan gives many particulars relating to St. Mura, principally collated from the "*Acta Sanctorum*," the celebrated work of John Colgan, a native of Inis-owen. Colgan was a Franciscan friar, attached to the Irish convent of St. Antony of Padua, in Louvain, where his book was published in 1645. He was a "Professor of Divinity, an Irish Scholar, antiquarian and Church Historian."

O'Donovan, writing from Buncrana on August 25th, 1835, says—"Yesterday we travelled through the parish of Upper Fahan, to get the Irish pronunciation of the names of the townlands, hamlets, &c., and saw the site of the old church of Fathain-Mura. It being a fertile district, the *Albany* have as usual settled in it, to the total exclusion of ancient traditions, and to the extinction of the fame of St. Mura. I could see nothing in the churchyard that belonged to the

<sup>1</sup> *Fathen*, or *Fahan*, in the Irish language literally means a green spot, or bosom, and is locally known as *The Bosom* to the present day, being almost surrounded by a circle of hills.

<sup>2</sup> Lough Swilly, *the Lake of Shadows*, from the hills around appearing so clearly reflected in the waters of the lough.



time of *Mura* but *two old stones*, exhibiting rude ornaments and representations of the crucifixion. We learn from Colgan that this was a place of much celebrity in former ages, and that some famous reliques belonging to it were preserved in his own time.<sup>3</sup>

O'Donovan adds: "The natives know nothing about St. Mura now, except that he first commenced to build his church on the summit of a hill at a short distance from the old graveyard of Fahan, and that some blessed birds made signs unto him to erect it in the hollow beneath."

The only confirmation now forthcoming of the fact that there had been an attempt to erect a church on the top of the adjoining hill is the existence on the summit of the Golan Hill, at an elevation of about 800 feet above the sea level, a cairn of stones, that evidently had been placed there at some very remote period, inasmuch as they are all "as grey as a ghost," and are now heaped together in conical form, having been collected by the officers of the Ordnance Survey as a distinguishing point for the purpose of their triangulation survey of Ireland.

Comparing the relative distances of the site of Aileach or *Tura* and Mount *Cromla*, in Inis-owen, as marked on Beaufort's map of Ireland, the distance would accord with the cairn of the Golan of Fahan.<sup>4</sup>

O'Donovan further says:—"I can get no account of Bachull Mura; it is probable that it was destroyed during the disturbances of 1688, or carried to the Continent. What does Dr. Petrie the great carrier off of Bachulls think?"

#### *The Bachull Mura or Crozier of St. Mura.*

The crozier of St. Mura found its way into the hands of Dr. Petrie, as suggested might have been the case by O'Donovan, but a portion of the crozier, comprising the head or crook, and about 18 inches in length of the staff, it seems was preserved in the vicinity of Sligo, whither in all likelihood it was carried about the time of the flight of the Earls in 1607. Dr. Petrie, the great collector of croziers, discovered it, and fortunately presented it (with many others) to the Royal Irish Academy, where it now remains: all its gems and adornments are gone, but what remains of the workmanship reveals the fashion and style of art of an early age. The late Henry O'Neill, in describing some drawings of the Bachull Mura, executed by him for the author of this Paper, says:—"The one which represents the shrine is the same size as the original; the other is double the size (lineal) of the ornamentation on the upper boss, this being well decorated. As

<sup>3</sup> See Colgan's *Acta Sanctorum Hiberniæ*, p. 587.

<sup>4</sup> The "Golan Hill," the hill immediately adjoining the site of the abbey.

the whole staff is much corroded, it was necessary, in order to give a just idea of the artistic character of the decorations on this boss, to represent all its ornamentation, and that my drawing should illustrate it, not in its corroded state, but as it was originally." He considered that it was ornamented with amber, such ornament existing on some brooches in the Academy's collection, or that it might have been ornamented with painted china, two specimens of which survive on the celebrated cross of Cong. The latter supposition is strengthened by the fact that such decorations are numerous on the ancient and beautiful crozier belonging to the Duke of Devonshire, a relic which has been illustrated in O'Neill's work on the "Fine Arts and Civilization of Ancient Ireland."

### *The Chain of St. Mura.*

The chain of St. Mura has been preserved; it is now in the Academy, having formed part of Dr. Petrie's collection. It is of bronze, and may have been attached to the cloak or outer garment, as a badge of office in the manner of mayoralty chains. The author is indebted for the particulars relating to the crozier and chain to Mr. Wakeman, the author of the *Handbook of Irish Antiquities*.

### *The Bell of St. Mura.\**

Another object of antiquarian interest, supposed to belong to the time of the seventh century, formerly held in great veneration, and connected with this abbey, is the Bell of St. Mura, the preservation of which to the present time is in itself sufficient to show the esteem and veneration in which it was held by its possessors. It was purchased about the year 1850 from a resident in the townland of Ludden, near Fahan, by Mr. John M'Clelland of Dungannon, who has given a graphic description of the Bell and its workmanship, in a Paper published in the *Ulster Journal of Archaeology*, with illustrations.<sup>6</sup> The present *locale* of the Bell is doubtful; some antiquarians assign it to the British Museum, but the author's recent inquiry on the point was answered in the negative by the Curator of that Institution. Further inquiries to endeavour to establish its *locale* have as yet been attended with no satisfactory result. Unfortunately the famine years compelled the humble possessors of the Bell, then residing at Lisfannon near Fahan, to dispose of this precious and venerable souvenir of bygone art, which it is hoped may, through the medium of this notice, soon find its way to the Museum of the Academy.

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\* A drawing in the *Ulster Journal of Archaeology*, vol. i. Since reading this Paper the author received a letter from His Grace the Duke of Leinster, saying that the Bell of St. Mura is at present in the museum of his sister-in-law, Lady Otho Fitzgerald.

<sup>6</sup> *Loc. cit.*, vol. i. p. 274.

*The Holy Water or Baptismal Font.*

Almost simultaneously with the transference from Fahan of the Bell of St. Mura, the Holy Water or Baptismal Font belonging to the abbey, which had been held carefully as an heirloom, and preserved by a neighbouring family, was entrusted to the care of the late Father Porter, P.P. of Malin in Inis-owen, and was by him placed in the Catholic church of Lag, near Malin, where it is still preserved. The Font is 20 inches in diameter, 15 inches deep, and cut hexagonally. The "Stoup" is 12 inches in diameter and 6 inches deep, and has a hole 1 inch in diameter in the bottom of the bowl; the stone is of native granite.<sup>7</sup>

*The Ancient Table Cross.\**

The only other visible "relique" which the fury of the times has suffered to remain near the precincts of this venerable site is a very fine specimen of the Ancient Table Cross of Ireland; it stands to the right of the ruins in the graveyard, and adjoins the site of the abbey. The interlacing of the ribbon tracery serves to delineate the outlines of the cross, in addition to the slight projecting arms on both sides of the stone (a photograph of which the writer has recently presented to the Academy); the pattern of the tracery is easily discernible, notwithstanding centuries of exposure to the rude blasts of a northern clime, and the author is confident that an examination of its details will evoke the admiration of every lover of Irish art.<sup>8</sup> A very chaste *fao-simile* of this cross has been lately executed by Mr. Walter Doolin of Westland-row, Dublin, under the direction of the author, for the purpose of being placed by his relatives at Letterkenny, over the remains of the late Bishop of Raphoe, the Most Rev. James M'Devitt.

A very fine Greek cross 16 inches by 14 inches, and raised within a marigold border, is preserved and built into the boundary wall facing the public road on the Derry side of the gateway. This cross may have been taken from the walls of the abbey itself, where it might have formed part of a mural tablet, which had been erected to the memory of some person of distinction. Local tradition says that this Table Cross formed the headstone of the graves of several Catholic Bishops, and that it marks the site of the grave of St. Mura, the founder of the abbey. Be that as it may,

<sup>7</sup> The author is indebted for the measurements and description of the "Font" to Mr. P. M'Laughlin of Glack-na-brad, near Malin.

<sup>8</sup> See Photographs in the Academy's Museum.

<sup>9</sup> An inscription in Irish characters was in former ages cut on the sides or edges of the cross, but time has almost entirely obliterated it; a rubbing of what remains has been obtained and submitted to Professor O'Looney, Catholic University, who was unable from its indistinctness to deduce therefrom a definite reading.

many eminent ecclesiastics have been buried in this graveyard, one of the latest having been the Rev. James Hegarty, Doctor of Divinity of Raphoe, who was interred under the shadow of this cross, in the year 1715.<sup>10</sup> The stone overlying his remains is of white Italian marble, but sadly discoloured, from its low position and by age; at its western end, or top end of the slab, is a space two feet square, which has been carefully carved over with what appears to have been a combined ecclesiastical and family escutcheon inside a graven shield. The ecclesiastical portion bears an angel with expanded wings: at the top are the words, partly obliterated, *In Occ—Columba*, together with an open scroll on one side, and the outlines of a church or castle on the opposite side. Below is what seems to be the typical seven-branch candlestick, supported by two doves, with this epitaph:—“Under this stone doth James Hegarty lye, Priest, and Doctor of Divinity; sometime Rector of the Roman Clergy of Raphoe; An ornament and zealous teacher of his Church and lover of his country; who changed this life in hope [of a] glorious resurrection, and . . . in the mercy of his God, the 30th day of June, 1715, in the 65th year of his age.” On another slab alongside the above, but of coarser material and ruder workmanship, and evidently of an earlier date, the same clerical and secular arms are graven. This second stone has a plain Roman cross at its top, rising out of the well-known symbolical letters I.H.S., on it is the angel with wings outspread, also a bell, book, and candlestick, and underneath the castle and open scroll the seven-branch candlestick and two doves, and the following inscription—

A.D. MEMORIAM REV. DOM. BERNARDI  
HEGARTY QVI PAR&CHI(?)Æ DE FAWN HAC . . .

together with about a dozen other letters entirely undecipherable. The inscription bears no date. Prior to 1833 this ground formed the general cemetery for all denominations of the district. On reopening a grave a few years since, a stone coffin was discovered therein. Another curious stone is to be seen built into the wall fronting the roadway to the left of the gate; in its centre is a circular hole, about the size of a closed hand. Many conjectures have arisen in the locality as to the former use and purpose of this stone. Some of the peasantry believe that it had been placed outside the abbey as a stoup for holy water. These, as O'Donovan states, are all the remains in the churchyard “that belonged to the time of Mura.”<sup>11</sup>

<sup>10</sup> I learn from Dr. Logue, Bishop of Raphoe, that a Dr. Hegarty of about this date has been traditionally spoken of in his native parish, near the Mulroy, under the title of the “Soggarth-Mor.”

<sup>11</sup> The Very Rev. Dr. Reeves has contributed an exhaustive article on “St. Mura” to the *Ulster Journal of Archaeology*, vol. i., in which he refers to the two old stone crosses.

*The Holy Well and Station of St. Mura.*

A singular instance of the simple faith of the Irish peasantry should be here recorded. The native Irish of the most Celtic parts of Inis-owen were ignorant of the very name of St. Mura; yet a traditional halo of sanctity surrounds his former dwelling-place, indicating that in times of old the place was a seat of holiness and scholarship. Hence pilgrimages to the Holy Well are common: around the "station" the pilgrims have for centuries made their "turas," they "tell" their beads, and fulfil such acts of prayer and penance as are usually paid by pilgrims at the shrines of the saints of their veneration. Many a pilgrim from Clonmany and Malin, foot-weary and travel-stained, has the writer seen sanctify this retreat with a devotion known only to the simple in faith—exhibiting, after a lapse of twelve hundred years, a religious belief as unique, and a fervour of devotion as enthusiastic as any that centred about the spot in the beginning of the seventh century. The "well" and "station" are contiguous to each other; the former is close to the Lough Swilly railway, near St. John's, the residence of Mr. Olphert, D.L.; the latter is in a field belonging to the same gentleman, and adjoins his garden; both are easily distinguished. Many miracles are spoken of traditionally as the result of the pilgrimages, but the recorded miracles mentioned by Colgan are lost. It should be mentioned that the Holy Well of Fahan owes its preservation, at the present day, to the large-hearted reverence of a native of Inis-owen for the reliques, eloquent in their very silence, of the ancient history of his country. The gentleman, who by the way, does not share the religious belief of the pilgrims who crowd the spot, prevailed upon the engineers of the Lough Swilly railway to respect the Holy Well, in fixing the curvature of the line. Consequently, to the former owner of St. John's, Major Marshall, J. P., aided by the active intervention of the then worthy and venerated parish priest of Fahan, the late Rev. Bernard M'El-Downey, we owe the saving of the Well from destruction. Major Marshall caused an ornate brick covering to be built over the Well; but the vandalism which had formerly, as Colgan says, effaced the remains of antiquity from the place, was still sufficiently rampant to tear down even the arched covering, and the fallen *debris* remains a monument to "the rabidness of their fury."

Dr. Reeves fixes the death of the founder of the abbey as having occurred about the year A.D. 645. The learned Colgan refers it to the commencement of the seventh century, on the ground that St. Mura wrote an account of St. Columba or Columbkil, who died A.D. 597.

Many of the successors of St. Mura in this monastery were persons of distinction who have left a name in Irish history; among them may be named Fothadh-na-Canoine or "the Canonist."

The parish of Fahan is noteworthy as having provided many bishops,

both Catholic and Protestant, for the ancient See of Derry. A former bishop of that See, the Most Rev. Philip M'Devitt, who presided over the diocese, and who died in 1797,<sup>12</sup> was born under the shadow of the Scalp Mountain at Crislagh, within bowshot of the present Catholic church of Fahan. That distinguished prelate, Bishop Ed. Maginn, was P. P. of the united parishes of Upper and Lower Fahan before his elevation to the episcopal dignity. The present ruler of the Catholic See of Derry, the Venerable and Most Rev. Francis Kelly, D.D., was P. P. of Fahan at the time he was called to occupy the See of the city of St. Columba; and the present distinguished prelate of the Protestant Church, Dr. Alexander, was likewise Rector of the parish prior to his elevation to the see of Derry and Raphoe.

Sometimes fact surpasses fiction in the marvellous; and it is indeed strange, even to romance, that the lands which had been granted to the founder of the Abbey of Fathan, by a king of Ireland in the beginning of the seventh century, should have remained until recently, throughout the vicissitudes of ages, an appanage of the church of Fahan. To the present day these are known as the church lands of Fahan, and amid all the changes of stormy and perilous times they appear to have escaped the general confiscation. Queen Elizabeth, by letters patent of the 28th of June, in the thirtieth year of her reign, upon the formal surrender of Sir John O'Doherty, confirmed him in his territory of Inis-owen, excepting the castle, lands, and tenements of this religious house of Fahan, then for the first time dissolved, the lands of which were required for the Queen's Bishop of Derry. Subsequently, however, Sir John joined in arms against her power, in conjunction with Hugh Earl of Tyrone; so that it is not surprising to find that, on May 1st, in the thirty-seventh year of Queen Elizabeth, the territory of Inis-owen, with the exception of three hundred acres around the fort of Culinore, and the lands which had previously belonged to the Abbey of Fathain, became formally forfeited to the Crown. Sir Cahir O'Doherty, son of Sir John, was the possessor of these lands at the time; but, on the 16th of July, in the eighth year of James the First, all the lands which had formerly belonged to Sir John and Sir Cahir O'Doherty were made over and granted to Sir Arthur Chichester, Baron of Belfast, excepting, however, from the grant six quarters of termon land or erenach land at Fahan, together with sixty acres of land adjoining the aforesaid six quarters, and adjacent to the parish church of Fahan. The names of the six quarters were, Letir, the Sleane, and Mill quarter, the Castle quarter, the Magherabegs, and the quarter of Lisfannon. All these have passed away during this century out of the hands even of the Bishop of Derry; and the remnant of the once broad acres attached to the Abbey of Fahan was reduced, in 1868, to the statutable quantity of ten acres surrounding the glebe house of Fahan; whilst the balance of the sixty acres—set apart in James's

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<sup>12</sup> O'Donovan, in his Ordnance Memoir of Derry.

patent to Chichester for the parish church—was purchased from the Church Temporalities Commissioners by the present respected Rector of Fahan, the Rev. John Canon King.

Nothing now remains of the castle belonging to Fahan Abbey except the name attached to and retained by the lands. The castle itself, which was evidently a square keep, and which is described in an account of the places of strength in the O'Doherty's country, previous to the establishment of the English colony by Dockra in Derry in 1601, was at that date the residence of the afterwards martyred Bishop of Derry, Redmond O'Gallagher.<sup>13</sup> It stood on a slight eminence adjacent to the eighth mile-post on the Lough Swilly railway. The site has long since been devoted to agricultural purposes, and the stones used up in the erection of the adjoining house buildings and farm works; the foundation lines, however, are still to be seen during the low growth of a pasture or grain crop, and are clearly traceable by the extra greenness of the crop over the site.

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<sup>13</sup> "Lough Foyle in 1601," MS. tract in State Paper Office.

## XXIII.—PRE-HISTORIC IMPLEMENTS FOUND IN THE SANDHILLS OF DUNDRUM, COUNTY DOW. By W. J. KNOWLES.

[Read, June 13, 1881.]

THE Sandhills of Dundrum are similar to those of Portstewart, Castle-rock, and Whitepark Bay, near Ballintoy, which I have described on various occasions. They all contain flint implements and other pre-historic remains, either lying exposed in hollows, or buried up in a black layer under a covering of sand which is in some places over fifty feet in thickness. The objects found in the hollows have also been buried up, but the covering has been removed by the wind.

I believe that fully five thousand objects of human workmanship, such as arrow-heads, scrapers, flint knives, hammers, ornaments of different kinds, and pottery, have been obtained from these Sandhills during the past ten years, and I am of opinion that large quantities are still contained in the black layers where the covering of sand has not been removed.

Dundrum, which is within easy reach by rail of Belfast, has been visited on one or two occasions by the Belfast Naturalists' Field Club. In their reports the finding of flint flakes is recorded. Knowing this, and also that the flint-bearing rocks are twenty-five or thirty miles distant, I scarcely expected to find flint implements when I visited the place for the first time in July, 1879, and therefore went chiefly to examine if black layers were to be found similar to those which I had observed at Portstewart and Ballintoy. My astonishment may therefore be imagined when, in addition to the black layers which I was in search of, I found the ground in places literally covered with flint flakes and scrapers. My time was limited, and I could scarcely spare a full day among the hills on any occasion; yet, notwithstanding this, and that it was an unknown place to me, where I had to walk backwards and forwards so as to take a proper survey, and miss nothing, I brought away in three short visits upwards of one thousand scrapers, forty-one arrow-heads, forty-six scrapers with concave scraping edge, besides hammer stones, dressed flakes, and several other articles of flint more or less dressed. The Rev. Canon Grainger, M.R.I.A., accompanied me on the third occasion, and also obtained a very nice series of objects, among which there was a small stone bead, similar to others found by me at Portstewart; and also a quartzite pebble with a linear groove on each side, and of the kind described as sling-stones in the Catalogue of the Royal Irish Academy.

The Sandhills are a series of irregular ridges and mounds of sand, heaped up by the wind, with deep pits between. The elevated parts have a covering of grass, in some places only of bent grass, but in others of different grasses mixed with moss, wild strawberry, bramble, and bracken, but the hollows are, as a rule, bare. The sand on the bare



parts is constantly blown about by the wind ; but when it falls on places having a grassy covering, some of it remains and is not blown off again, owing to the shelter afforded to it by the blades of grass. As the grass grows longer, so as to be able to afford more protection, more sand will be retained, and therefore the protected parts become gradually higher, while the hollows, which are unprotected, tend to become lower. In this way the black layer, which is the old surface on which the ancient inhabitants lived, became slowly and gradually covered over with a great thickness of sand ; but in many places the protecting sward has got broken, and the wind speedily carried away the sand, forming large hollows. There are various ways by which the protection of grass may be broken through, such as the burrowing of rabbits, but the practice of drawing sand for agricultural purposes, which has lately come much into use, has been a certain cause of openings on which the wind could act. Part of the Sandhills near Ballintoy, where I obtained many flint implements, was, within the memory of an old inhabitant of the district, covered with a thick sward of grass, but when an opening was made, the wind soon carried off a great thickness of sand, laying bare the old surface with all its treasure of wrought flints and accompanying remains. This old surface layer, in all the places I have found it to exist, withstands the denuding action of the wind for a long time, and the objects it contains are only gradually uncovered ; but at Dundrum, as in other places, it has been cut through in many parts. In such cases the lighter material has all been carried away by the wind, and the various dressed flints and flakes which it contained are left exposed on the sand. Frequently, when we mount a hill, we will see lying in the hollow below or on the slope of an opposite hill innumerable white objects shining in the sun. These are the flints and bones which have dropped out of the layer, and it produces a most agreeable sensation when one comes on such a place for the first time and sees all the lost objects which the old surface layer contained spread out before him. Where the flints have been left bare, by the dark layer being carried away, I have observed that they are not strewn continuously over the surface, but are rather confined to certain spots. You may meet with a considerable number, all collected within the radius of a few yards, thicker towards the centre and gradually thinning as you approach the circumference, till at last none at all are to be found. Then, at a short distance, we may find another spot where they will be met with in abundance as before. We sometimes find a few boulders in the centre of these spots, which I believe have been used as hearth-stones, and therefore I conclude that those places where we find the accumulation of flints are sites of dwelling-places, and that the manufacture of flint implements was carried on in and around them. At Ballintoy, foundations in stonework of such dwelling-places are visible, and the outline is in some cases still perfect.

I have frequently called the black layer the implement-bearing layer, because it is only in it we find implements of flint, except in

such cases where the layer has been removed by denudation.<sup>1</sup> It is generally from three or four to about twelve inches in thickness, and I have obtained from it a great quantity of objects precisely similar to those which I found exposed in the hollows. In excavating, however, unless one happens on the site of a dwelling-place, the work may be unprofitable and disheartening. The weight of sand above, which falls down in large quantities when only slightly undermined, makes excavating difficult, and without the greatest care a small object like an arrow-head, or small beads such as I have found at Portstewart, would escape notice. Where I have found the layer laid bare, I generally dug it over myself, using the greatest possible care, and allowing nothing to pass without minute examination. At Dundrum, owing to the large surface—several miles in extent—which required to be examined, I confined my attention at first to the objects exposed on the sand, merely satisfying myself as to the nature of the layer as I went along; but in August of last year I was fortunate enough in finding the site of one of those ancient dwelling-places, which I excavated. I found it to contain three finely-dressed scrapers, of a larger size than usual; a fine flat flake dressed over the back and partly on the flat side; a specimen of a similar kind, which had been in the fire; another long, thin, and knife-like flake; besides other flakes, cores, hammer stones, broken pottery, and bones. There was also a fine stone hatchet, 7½ inches long, made of handsome, hard, greenish stone, and finely polished, which appeared never to have been used, and looked just as if fresh from the maker's hands. There was, besides, a stone somewhat circular in shape, and about three inches in diameter, with a pit or hollow on one side, like those pits which we find on oval tool-stones. I had previously found stones more or less pitted, in different parts of the hills, as well as at Portstewart and Ballintoy, associated with flakes, cores, and hammer stones, but was only able to guess at the object of them. I was inclined to look on them as oval tool-stones in an early stage of manufacture, and I think I can show that I was correct enough in that view; but it now occurred to me, from finding hammer stones, cores, and flakes so closely associated with this pitted stone, that it had been used as a rest or anvil on which to lay the core when chipping off the flakes.

After the account of my find of flint implements appeared in the local papers, I learned that the Marchioness of Downshire was taking a good deal of interest in the subject, and was forming a collection of the flint objects found among the Dundrum Sandhills. Being anxious not to be regarded as a trespasser, and wishing to explain my reasons

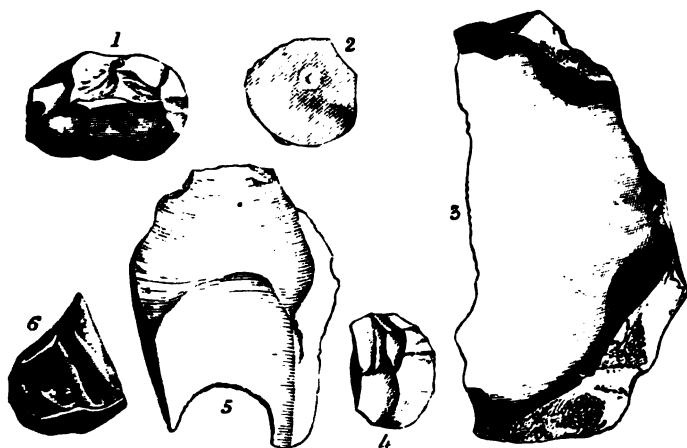
<sup>1</sup> Mr. William Gray, of Belfast, in a Paper contributed to the Royal Historical and Archaeological Association, in July, 1879, and appearing in No. 39 of their Journal, says that the objects are found *on* the black layers, because being tougher than the sand above and below, they stand out as ledges and arrest the descent of the flints, &c., which are constantly slipping down from the top. I have no doubt that a little attentive study on the spot will convince Mr. Gray that this is not the case.

for going there at the first, I now wrote to the Marchioness of Downshire on the subject, and had the honour of an invitation to be present at excavations which were about to be made. The object of these excavations was the examination of the black layer, and the result was fairly satisfactory. We dug up several cores, flakes, and fragments of pottery out of the black layer at the place where I had obtained the dressed flakes and fine stone hatchet; but, though there was abundant evidence of human workmanship in all that was turned out, no object of much interest was obtained, except one beautiful arrow-head, which was found by Lady Arthur Hill, a short distance from where we were digging. We tried other places, and obtained several objects worthy of notice, among which was an excellent hammer stone with abraided ends, showing much use in hammering, and having a circular pit on one side. At last we were fortunate enough to find a place which must have been the site of an ancient dwelling-place. On following the layer we saw it become thicker and darker in colour, and pieces of pottery, fragments of bone, hammer stones, cores, and flakes were at the same time being turned out. The work was now closely watched by Lord Arthur Hill and myself, and everything that came out was carefully examined. At last, when we had reached the thickest and darkest part of the layer, we found an anvil stone, weighing several pounds, and pitted in two or three places, and a hammer stone with abraided ends lying beside it. In close association with these were also cores and flakes. The falls of sand obliged us to give over, but we considered that the result of our digging was most satisfactory. The objects were not in themselves very valuable, but they were highly instructive. They were evidently the humble stock-in-trade of an ancient flint implement maker.

Of the various implements, scrapers are by far the most abundant. If used for scraping skins for clothing and taking food from bones, we can easily conceive that they would be numerous. Each person would be constantly requiring one; and if we only count the number of scrapers already found, which must be from fifteen hundred to two thousand, it would show a considerable population for the district around Dundrum. But it is probable that, besides being in daily use, they would be manufactured for the purpose of barter. They vary greatly in size, none of them being very large like some of those found at Ballintoy. A few are of medium size, or about one and a-half to two inches long, but the majority are much smaller, and some are not longer than the nail of the little finger. Figs. 1, 2, 4, and 6 show some of these full size. A great number appear to have been hastily made, and show portions of the outside crust of the flint-pebble from which they were struck off, but there are still quite a large number which show as neat and careful workmanship as any arrow-head. The poorest, however, generally show that careful dressing of the edge into a circular form so peculiar to scrapers. As regards size the contrast between Ballintoy and Dundrum is very marked. In the one place the flint is at hand, the implements are all large, and

there is a great deal of material, one would say, wasted. In the other, the material is scarce, closely wrought up, and the manufactured objects are small. The scrapers have different forms, some of them being broad at the scraping edge, some more or less pointed, while others are dressed to scrape in two directions, but the majority have a neatly-dressed circular edge.

Of scrapers with concave scraping edge I obtained about fifty. These are generally made of large and good flakes. The majority have only one scraping edge, but a few have two or three dressed edges, of circular form, and occasionally we find the two kinds—that is, the convex and concave edge combined in one tool. Some of them are neatly serrated, and the hollowed scraping edge varies greatly in size. The diameter of the circle might be stated to vary from  $1\frac{1}{4}$  inches to  $\frac{1}{2}$  inch. One is shown full size in Fig. 5. I got all those



which I found at Dundrum in three or four spots, about a dozen in each place. They would be found lying about within a few yards of each other. I imagined either that the tradesmen who wrought with these tools sat and worked in groups, or that the manufacturers of them had made a lot while sitting in the same spot. It is imagined by some persons that these objects were used as saws, and they have obtained that name among collectors in Co. Antrim, but while some may have been used in that way, there are others totally unfitted for such a purpose. I am therefore inclined to believe that the chief use for which they were employed was the scraping of cylindrical objects. I found three scrapers of this kind at Portstewart, but I never got one at Ballintoy. I also found two flat-edged scrapers. They differ in type from the ordinary flat-edged side scrapers, as the dressing is not carried out to the edge of the flake, but, like the hollow scraper, the dressed part occupies a space in the centre. As these

are serrated, probably they may have been used as saws. Fig. 3 represents one of these objects, but the woodcut scarcely does justice to its neatly serrated edge.

Of arrow-heads I have about twenty that are perfect, and about the same number of broken specimens. The Marchioness of Downshire has fully as many, I should say, very beautiful and perfect. They show very fine and skilful workmanship, and the porcellaneous glaze which has been imparted to them by exposure on the sand has added much to their beauty. Several types are very well represented—stemmed, indented, triangular, leaf-, and lozenge-shaped. One of those in my own series, which had been broken at the point, has had the broken part dressed for use as a scraper.

There are several dressed flakes and awls. Some of the flakes are only dressed round the edges, but others are dressed over the back, showing as fine chipping as that on most arrow-heads. This kind of implement appears to be commonly found along with the burned bones in interments. Several of these are figured by Canon Greenwell in "*British Barrows*," some of them being beautifully serrated. Among the bones found in a burial urn which lately came into possession of Canon Grainger, a burned specimen of this kind was found, and in another urn, which was found at Cullybackey, there had been a similar implement, as I picked up a portion of it from among the bones, which were scattered, before I was able to secure them.

Several flat and thin flakes show evidence of having been used as knives, though no trouble has been taken to dress them into shape.

Cores are plentiful, but all are small, showing the outside weathered crust, and thus indicating the nature of the material used. I believe the people had been entirely dependent on such small boulders as they could procure from the drift and around the sea shore, and that very probably none of the flint had been either brought by them, or procured by barter, from a distance. Everything shows that the flint was not so plentiful as they could desire, and other material was tried. I procured several neatly-formed flakes of quartz crystal, and a scraper of greenish rock, of a kind found plentifully scattered about. I observed several other flakes of various kinds of stone, which I believe were used as scrapers; but all stones except flint have suffered so much from weathering that one cannot always speak with certainty of the artificial character of any marks which appear on them.

Several stone hatchets were found, but only the one which I excavated, and have already described, was derived directly from the black layer; but that the inhabitants manufactured hatchets I think there can be no doubt, as I found a stone object with two grooves into which the flat side of a stone hatchet would fit when being rubbed backwards and forwards to polish it; and I think it is probable that the stone referred to could be used for no other purpose. The hatchet which I dug out of the layer appeared as if it had never been used; and stone of a similar greenish colour to that from which it is made occurs among the hills.

I found a stone with a large cup-like hollow on one side, and a smaller depression on the other, but the hollows are not opposite. The larger hollow appears to have been artificially smoothed, but the original crust of the stone has been removed by weathering. The two hollows communicate by a small oblique opening. The bead is of the same type as those which I found at Portstewart, and is made, I believe, of the same material—serpentine. The beads from Portstewart are very small, about the size of the smallest shirt buttons, and not unlike them in shape, being somewhat rounded on one side, and cup-shaped on the other. I have a considerable number of larger beads, or amulets, of the same material, found in different parts of Co. Antrim. They are flat, and the edges not dressed into a circular shape, but retaining any irregular outline that the stone may have had at first, though highly polished. They are frequently of a beautiful green colour, and I believe from the circumstances I have stated that the material must have been highly prized. I do not find that the Royal Irish Academy have any of these in their Collection.

The sling-stone, as such stones are named in the Catalogue of the Royal Irish Academy, is a quartzite pebble, with a groove on each face, such as might be made by rubbing a pointed instrument backwards and forwards. It was found among a heap of pebbles at a short distance from a spot where scrapers had been picked up, but not just in association with them. Mr. Evans, in "*Stone Implements and Ornaments of Great Britain*," supposes that such stones are whetstones, and states that they are not met with in England as a rule, but that stones of a somewhat similar kind are found in Scandinavia, of shuttle-like form, and having a furrow or groove round the edge. I have one of those shuttle-like objects, and the small groove on the face is exactly similar in character to the grooves on our Irish "sling-stones." I have fifty-two of these so-called Irish sling-stones, and I observe that where the stone is handsome, it has been carefully dressed into an oval or shuttle-shaped form, and bevelled all round to a pretty thin edge. These Scandinavian and Irish whetstones, for such I believe them to be, were in my mind used for identically similar purposes; but the question naturally arises, why was a groove made round the edge in the one case, and the edge bevelled so as to make it thin in the other? Now, I would suggest that this is a nice development problem. In these early times, when pockets and travelling-bags were not invented, the necessity for carrying objects about would be greatly felt; and I think, in regard to the stones under consideration, the problem was solved by two separate peoples in different ways. The one made a groove round which a thong could be tied; and the other bevelled the edge for the purpose of inserting it into a frame or binding of leather; and thus in both cases the stones could easily be carried about by suspending them from the dress. The grooves on the different sides of our Irish specimens generally run in the direction of the longer axis of the stone, and as a rule the grooves on the opposite sides form a small angle with each other, though I have found them perfectly parallel, and also crossing at right angles.

Hammer stones of quartzite, granite, flint, and other tough rocks are found in considerable abundance. The ends are always much abraded, and sometimes pits occur on one or both sides, showing that they were used as anvil stones.

Anvil stones are also plentiful, and are made of different kinds of rock. The finding of such stones at Dundrum, as well as at Portstewart and Ballintoy, has, I think, given a clue to the formation of oval tool stones. The tool stones have, in my opinion, originated from anvil stones, the pit having been formed by the laying of the object to be hammered constantly on the same spot. However flakes may have been struck off by other peoples, or by savages in the present day, I am convinced that the ancient inhabitants of Dundrum, Portstewart, and Ballintoy laid the core on the anvil stone, and then separated the flake by striking with the hammer stone. The laying of the core for a certain length of time on the same spot produced a depression, which got deeper the longer it was used. I have observed stones having these depressions in all stages, from the first minute punctures, with sharp lines running from them to the margin of the stone, showing how the core had jerked to the side, down to the deep and regular depression. On a recent occasion I found at Ballintoy the half of one of these stones, with pretty deep marks on both sides and opposite each other. The stone had split into two equal parts exactly through the centre of the hollows. The portion of a tool stone which I excavated at Ballintoy in the summer of 1879 was also, strange to say, the half of a stone which had been split through the centre in the same way. The question now occurred to me, Why are they split across in this way? and the answer seemed to me clear. They were anvil stones, and the constant hammering on the same spot split them. It occurred to me now to make an experiment. I took a quartzite hammer stone, which I had found at Ballintoy, and used it as an anvil stone, and taking another stone as a hammer and a piece of flint as a core, I commenced hammering as if I were going to dislodge a flake. In a short time a pit was produced in the anvil stone, quite similar to the pits on the anvil stones from the Sandhills. I continued hammering, to see if at last the deeper hollow with regular outline, such as we see in the more finished tool stones, could be produced, but just when my object was very nearly attained, my anvil split. I can now explain a great deal which I previously could not understand about the large series of oval tool stones in my collection. I knew they could not have been manufactured for hammers, because some were too large to be handled, and others were too small to be of any use, and, besides, some were of stone not suitable for hammers. But where formed of quartzite or other tough stone, the ends are generally abraded. These had been made to serve the purpose of either hammer or anvil, as occasion required. In the Christy Collection in London there is a mass of breccia, made up of flakes, broken bones, etc., from one of the Rock Shelters in France, and embedded in the mass I observed a stone with a cup-shaped pit. It appeared to me to have all the character of the tool stone. If you saw a tool stone embedded side by side with it, you

would say both were intended for the same purpose. Now, what was the use of that stone, and what is it doing there? The answer is now plain to me. It is an anvil stone which the ancient people who lived in these Rock Shelters used for laying the flint cores on when they wanted to strike off flakes. When I first found tool stones at Portstewart and Ballintoy, I had no doubt in my mind that they were of the same age as the flint implements that were found with them, but I knew that Sir William Wilde and Sir John Lubbock had expressed doubt as to whether this class of objects belonged to the Stone Age, and I hesitated about expressing my opinion too strongly. Mr. Evans reviews the question in a very fair way in "*Stone Implements and Ornaments*," but I think he speaks rather unguardedly against the view that they are of the Stone Age in his Presidential Address to the members of the Anthropological Institute, delivered on 29th January, 1878. He states, when reviewing a Paper of mine, that if it could be proved that the tool stones and scrapers were contemporaneous, he would more readily accept the scrapers as belonging to the Age of Iron than the tool stones as belonging to the Age of Stone. I regret having to differ from one whose great experience and knowledge of the subject so well entitles him to pronounce judgment on any point; but if the theory I have stated is found correct, as I believe it will be, these implements, instead of belonging only to the early Iron Age, must be regarded as belonging peculiarly to the Stone Age, and even extending back to the early Stone Age.

A variety of other objects have been found, for example—grain rubbers, pottery, and a portion of a jet ring or bracelet. The pottery was found only in fragments; some ornamented in the usual style of burial urns, and other pieces which were turned out from the black layer had a peculiar smoothed and polished appearance on the outside. I believe all the fragments were pieces of domestic vessels.

In the other Sandhills we found great quantities of teeth and bones, broken and split, also cut in various ways, and some of them manufactured into useful objects, such as pins and needles. Professor A. Leith Adams found that those of man, horse, ox, dog or wolf, fox, deer, and hog were contained among them; but, though we find bones mixed up with the stone objects at Dundrum, they are not in a good state of preservation, and I was only able to determine with certainty the teeth of horse and ox.

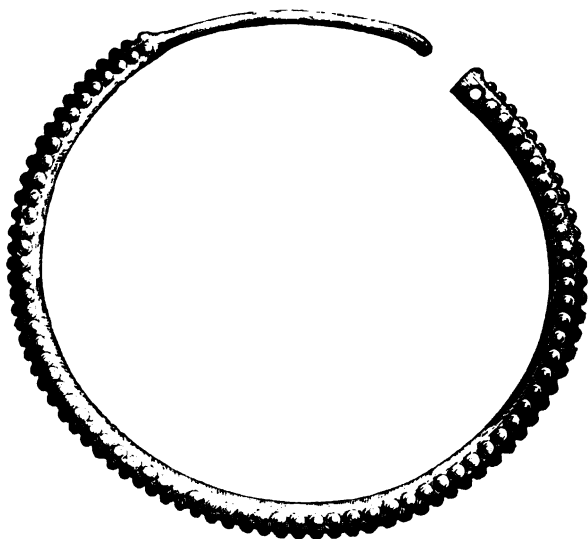
It would be interesting to have experiments made to test the rate at which sand accumulates on the top of the grass-covered hills. I have tried it at Portstewart; but owing to living at a distance, and cattle grazing on the hills, as well as people walking at liberty over all parts of them in search of game, my experiments were not satisfactory. The best evidence I have got of their slow growth was from the Dowager Marchioness of Downshire, who informed me that small hills, covered with bent, had slowly risen up in a place where it was formerly bare sand, and at almost sea level, since she went first to live at Murlough forty years ago.



**XXIV.—ON AN ANCIENT BRONZE BRACELET OF TORQUE PATTERN  
OBTAINED IN CO. GALWAY. By W. FRAZER, F.R.C.S.I., M.R.I.A.**

[Read, November 14, 1881.]

THE handsome little bracelet of bronze, which I am enabled this evening to show to the Members of the Academy, was given to me a few weeks since by Richard A. Gray, Esq., County Surveyor for South Dublin. Our Museum has obtained from this gentleman large and valuable additions of numerous objects of antiquarian interest, and he has placed antiquarians under deep obligations for the quantities of such articles secured by him for our benefit when, many years ago, he



was engaged under the Board of Works in the excavations and deepening of the Rivers Boyne and Shannon. I do not hesitate to say that only for the personal interest he took in their preservation many of our prized Irish antiquities would have been destroyed or thrown aside, and utterly lost to this Museum and to Archæology.

The bracelet now in my possession was originally purchased by Mr. Gray's father, Dr. Gray, in the Co. Galway, several years since, and, similar to too many of our Irish antiquities, the history and circumstances of its discovery are altogether unknown—probably it turned up in cutting a bog, or in the bed of some stream, and then

passed from its finder's hands into the possession of Dr. Gray, who knew its value, and preserved it. After his death it was in the possession of his son, Mr. R. A. Gray, for several years, and he gave it to me a few weeks since.

This bracelet possesses peculiar interest from its shape, which is altogether unique. We have numerous bracelets in the Museum of this Academy, and many others are figured in the works of writers on the bronze ornaments of the Earlier Ages, but none of these correspond to the pattern of this one. It is, in a word, the perfect miniature representation of the old Celtic, or Gaulish Torque. Its ends are fastened together by the prolongation of one extremity into a simple wire, the curved termination of which clasps into a perforated aperture at the other extremity of the bracelet.

The ring of bronze itself is decorated with a pattern at once effective, simple, and artistic: a triple row of detached semicircular elevations of small size run all along its back and either edge from end to end for about five-sixths of their extent, the remaining sixth part being formed of the prolonged fastening wire. In the modelling of its ornamentation and its form it is, I believe, altogether unique, and it presents us with an additional illustration of the great skill and artistic ability of the old bronze-workers of Ireland, men who developed and executed a class of art objects in a rude age which we to this day may regard with admiration and justifiable pride.

**XXV.—THE AYLESBURY-ROAD SEPULCHRAL MOUND. DESCRIPTION OF CERTAIN HUMAN REMAINS, ARTICLES OF BRONZE, AND OTHER OBJECTS OBTAINED THERE. By W. FRAZER, F.R.C.S.I., M.R.I.A.**

[Read, February 13, 1882.]

THE excavations carried on at the great sepulchral mound in Aylesbury-road, Donnybrook, where I was permitted to have exceptional opportunities for investigating all the circumstances attending that interesting discovery, may now be considered as finally brought to a termination, for a dwelling-house of large size is erected over the greater part of the site of the mound itself.

Since the period I was permitted to lay an account of my investigations of this mound before the Royal Irish Academy (*vide antea*, p. 29), no possible opportunity was neglected of continuing and perfecting my search there. But although from time to time several additional skulls and portions of skeletons turned up, they seldom were possessed of special importance, or appeared to require detailed description. An exception must, however, be claimed for the last skull which was brought to me, and which I have the privilege of exhibiting this evening. Together with it I purpose showing a bronze pin, also found about the same time, and a few other objects of antiquarian interest that came into my possession as the workmen discovered them in the mass of clay and human bones where they worked. They are, I believe, worth placing on record to complete the history of the excavations.

The discovery close to our city of a vast mound of human remains—I am under the limit in saying it contained the bones of upwards of 600 or 700 human beings—was calculated to excite attention and give rise to various conjectures as to the origin of such a state of things. Tradition gave no clue to explain the occurrence of this mound, and our historic records, so far as they are yet known, were equally silent. Where the early records of Irish history are concerned, I believe everyone who has dispassionately searched in them must be convinced of their perfect truthfulness, and of the marvellous accuracy with which events of very early date are recorded. I have no doubt an account of this mound and its origin were once to be found in such records; but we know that the annals of Dublin history especially were unfortunately destroyed long since—possibly they perished in the fire at St. Mary's Abbey.

In disinterring and examining the bodies found in the mound, I resolved to use every possible means for arriving at a deliberate conclusion, as if I were engaged in a recent medico-legal investigation, having had the good fortune to be permitted to study the place at my leisure, and, I may say, from the period of the first discovery of human remains there until the mound was altogether investigated to

its borders. The first skeleton disinterred was that of a Danish chieftain, with his iron spear and his silver- and gold-mounted iron sword—the last was one of the unfortunate victims of a massacre where young and old, the unborn child and the mother, the idiot, the lame, men and women and young children, indiscriminately perished. I got from these ample evidences of brutal murders and of violent deaths, such as savages inflict on their victims.

Judging from the anatomical peculiarities of the bones themselves, which I have fully described in my last communication, we might reasonably place this massacre at the date when such things are known to have occurred, namely, about the time of the Danish Piratical Invasions, and this is corroborated by the discovery of the undoubted Danish weapons and of Irish bronze pins and rings, which are referrible to about the same period.

It would not be difficult, from the numerous skulls which I obtained, to give proofs more than sufficient of brutality and murderous violence; yet the last skull that was disinterred will of itself give us striking and convincing proof of the truth of this statement. I have preserved this specimen in the exact condition in which it was brought to me after being dug up out of the ground where it lay. It still has the tenacious clay soil adhering to it, and keeping the broken fragments together, and filling up its cavities. We notice that it must have sustained a powerful blow from a club or heavy bar, striking it from above, and falling on the nose and upper jaw. The surface of the superior maxilla is crushed in, the central incisor teeth driven from their sockets, and with them the left lateral incisor teeth also. The terrible blow has in addition produced a compound fracture of the lower jaw, from direct violence, about an inch to the left of the symphysis of the jaw-bone; and besides this, there are two simple fractures situated one at each angle of the jaw-bone respectively: thus we have three distinct fractures of the lower jaw resulting from this crushing blow. Nor is this the entire extent of the mischief, for the extreme violence used has driven the right condyle out altogether from its articulating surface with the upper jaw-bone, and produced an exaggerated dislocation of the jaw upon that side, the articulating head being forced below and behind the mastoid process. To accomplish such an unusual and excessive amount of displacement must have demanded a proportionate application of force; but the appearances of these injuries thus inflicted are as fresh and well-marked as if they were produced within the last few weeks, instead of bearing witness to an act of barbarism perpetrated perhaps one thousand years ago.

The discovery of bronze ornaments of undoubted Irish workmanship with these bones assisted greatly in determining the probable age of these depositions, and the few articles of iron, especially the spear, the arrow-heads, and the iron rings found round the arms of young persons, were all-important. I have much pleasure in showing a second and fine example of the bronze pin with ringed looped top, which turned up in the soil of the mound and came into my possession. The pin por-

tion measures four inches in length, and bears a fine green patena, except in those places where it was removed by the finder, who thought he had obtained a golden prize. This is the second pin of similar form obtained from the mound; but the first one, which is figured in my previous Paper, is of much smaller size, and, when found, was broken into pieces.

I obtained in addition a round knob of yellow bronze, resembling the head of a large nail with its stud. This, it is probable, was originally a portion of armour, possibly the decoration of a shield. There was also got a bronze ring for the finger, of simple form. The only other object which I will show is a portion of a bone comb referrible to a very early date. All these corroborate the view taken as to the probable period of the massacre; and the paucity of such objects in the interments shows how thoroughly the piratic plunderers stripped the unfortunate people of their personal ornaments and property.

XXVI.—ON SOME ANCIENT REMAINS AT KILMACLENINE, WITH ILLUSTRATIONS FROM THE *PIPA COLMANI*. By REV. THOMAS OLDEN. (With Plates VI. and VII.)

[Read, November 30, 1881.]

THE parish of Kilmaclenine, in the county of Cork and barony of Orrery and Kilmore, lies about five miles north-west of Mallow. It is a prebend of the diocese of Cloyne, and the entire parish, which is very small, formed one of the estates of the See of Cloyne down to the middle of the seventeenth century. There are but two townlands, that of Kilmaclenyn, 609A. 1R. 33P., and Knockaun-a-vaddreen, 432A. 2R. 15P., making a total of 1042A. 0R. 8P.

When I came to reside in this neighbourhood, my attention was attracted by some remarkable ruins here, of which I could not find any history or local tradition; but on turning over the pages of the *Pipa Colmani* I found Kilmaclenine so frequently mentioned that I was led to make further inquiries, which have enabled me to put together the following remarks. Before referring to the ancient record alluded to, it is desirable here to notice briefly its nature and contents, which I may presume to be but little known.

This document was known to Sir James Ware, who terms it the *Pipa Colmani*, or Pipe-roll of St. Colman of Cloyne; but in the middle of the last century, when Smith wrote his *History of Cork*, it had disappeared, and was supposed to be lost.

It turned out, however, to have been all the time in the Registry of Cloyne, where it was found some years ago, and having been placed in the hands of Dr. Caulfield, was published by him in 1859.<sup>1</sup> The Roll is 17' 8" long by 7½" broad, and is composed of ten membranes sewed together. It was begun in 1364 by Bishop Swaffham, and records "the findings of juries, and various acts and deeds relating to the temporalities of the See of Cloyne." It was continued by subsequent bishops, and entries were made which relate to events during the time of eleven occupants of the See, from David (1228) to Adam Pay (1421). Intermingled with the Latin text are English and Irish words, spelt phonetically, and in the case of the former evidently by writers whose pronunciation was French. Thus, the hill is "le hylle"; a horse, "a hores," &c. The French definite article, as well as the preposition "de," is of constant occurrence, and there are other indications of the Anglo-Norman character of the document to which I need not refer.

But to return to Kilmaclenine. Amongst the antiquities of the place some pre-historic remains may be first noticed. One of these is

<sup>1</sup> Rotulus Pipæ Clonensis, opera et studio Ricardi Caulfield, B.A. Corcagiæ, MDCCCLIX.

a stone circle, standing on the southern slope of the table-land which occupies the centre of the parish; some of the stones are prostrate, and all are much weather-worn and bear marks of extreme age. North-east from this, about a quarter of a mile off, and on a site commanding an extensive view of the valley in which are the castle and ruins of Kilmaclenine, are the remains of a sepulchral mound, marked on the ordnance map as "the Cuthoge." The local tradition is, that about sixty years ago, when the mound was perfect, the farmer on whose land it stood, believing it to be a limestone rock, built a lime-kiln hard by, and proceeded to quarry the stone. The limekiln still remains, but no lime was ever burned in it, as the farmer found only earth and small stones, until he approached the surface of the ground, when he came on a tomb composed of large slabs. In this was a skeleton, and by its side a sword and some beads. All these have disappeared, but the tomb remains, now denuded of its covering of earth, as in the sketch. (Plate VI.)

This mound appears to be the one mentioned in the Roll under the name of "Knokān Glassenet quæ dicitur Knokān Lepotes,"<sup>2</sup> and the adjoining townland and farm are still called "Knockaun."

The descriptive name "Glassenet" is now forgotten, and what it was meant to represent I am unable to say, the word having been written by one unacquainted with the language, and not successful in catching the pronunciation. I have been tempted to think it might represent *ḡlār fíne*, which, according to the Supplement to O'Donovan's Dictionary, means "the foreign tribe." This would derive some slight support from the local belief that it is the tomb of Turgesius—the Dane, as usual, taking the place of the more ancient invader. But all this is uncertain, as is also the meaning of the alternative name, of which we can only say that according to the usage of the Roll it represents the name by which the Knockaun was known to the English settlers in the thirteenth century.

By the side of this tomb, where part of a very ancient road still remains, was held in the last century the great fair of Kilmaclenine. In a Report on the State of the District around Mallow,<sup>3</sup> prepared for the Royal Dublin Society in 1775, the following passage occurs:—"There are three remarkable fairs for horses in this neighbourhood—one at Kilmacleenin, four miles north-west of Mallow, on the 21st of June; one at Cahirmee, four miles north of Mallow, on the 12th of July; and one at Kildarary, nine miles north-east of Mallow, on the 3rd of September." The two latter fairs still exist, but Kilmaclenine, having been transferred to Ballyclough some years ago, has since become extinct.

From these remains which have been noticed, as well as the unusual number of Lises and Rathes in the neighbourhood, and especially

<sup>2</sup> *Pipa*, p. 18.

<sup>3</sup> Privately printed by Sir D. J. Norreys, from a MS. found amongst his papers.

in the parish, it was evidently a place of importance in the sixth century, when Colman Mac Lenine built the cell from which it derives its name—*cill mac Lenine*, "the Church mac Lenine." There are many memorials of St. Colman in the neighbourhood, amongst which may be mentioned Spenser's Castle of Kilcolman, but this is the only instance where he is spoken of only by his family name. In a Paper on St. Colman's history, which I lately published, I have shown from the Book of Munster that the name of Colman was given to him in middle age, when he was baptized by St. Brendan; and on that occasion the King of Cashel, to whom he had been the official bard, compensated him for the loss of his fees by relieving him of the tribute or rent he had previously paid; and it is just possible that these lands, known as those of "Mac Lenine," may have been the lands assigned to him as bard, and by him made over to the Church on his conversion to Christianity.

However this may be, when the Roll takes up the history of Kilmaclenine, early in the thirteenth century, it was called by its present name, and formed one of the estates of the See of Cloyne.

The Roll deals with the Manor and Burgage of Kilmaclenine: taking the Manor first, we have an enumeration of the "*nomina quarterenarum de terra arabili capta ad manerium*."<sup>4</sup> Here are preserved the names of many places in the parish which are now entirely forgotten; some are Irish, some English, and some a compound of both. There are "*le Carryg*," of which I shall speak presently, and "*Curragh*," "the marshy place," and the *old orchyard*, and *Gorterous*, which appears to mean the "rough field," and *le Cnok*, "the hill." Another was known as *Gylrathdousfeld* of Heblakerath, the latter name seeming to be partly a translation of the former. Another was termed *Fern Macbaghly*, or "Macbaghly's farm," another *Rathgybbe*, which may be *Ῥατ-Ῥιὸβ*, "the Rath of the School." One acre abutted on *Muksway*, evidently the "Pig-stye road" (*mucfoil*). Another acre and a-half was near *Cnokrath* "the hill of the fort," *Lakynoroyhey*, the "hill-side of the cross," *Siron Cnokrey*, the "point of the grey hill," and *Mora* (the bog) *de kylyn de kylmarauch*; and we have in English *le langelond*, and *le hylle*, and *le Blakedyche*, and "*Louhansalauch quod dicitur Hores-loch*," or "the horse-pond." The two *Gortyngebauchs*, possibly *Ῥοιπτιν Ῥιβεατ*, the "pretty garden," and *Lessenchynauch*, and lastly, *Cnokan Glassenet*, of which I have already made mention.

There seem to have been 267 acres in the Manor, which were divided into 26 lots, giving an average of ten acres each. Turning now to the Burgage, we learn that Bishop David McKelly (1228-1237) "measured and perambulated certain lands which he bestowed on his beloved sons, the burgesses of Kylmaclenyn." This was the Burgage occupied by a colony of English settlers who were governed by

<sup>4</sup> *Pipa ut supra*.



a Provost and burgesses. In the rental of the village made by "three of the burgesses with the Provost," all sworn, and elected by the whole community, the names of twenty-nine tenants are given, with the rent paid by each, and the quantity of land, if any, he held.

The average was about five acres, and the rent of house and land about 1s. 6d. a-year. Then follow forty-eight joint tenants who had no land, and whose average rent was only 4d. a-year. These seem to have been of the labouring class, and no doubt serfs. The bishop gave an undertaking that the colony should be governed by "the law of Bristol." "*Dicti burgenses et eorum heredes nobis et successoribus nostris secundum legem Bristolii in omnibus et per omnia respondebunt, et secundum eandem legem tractabimus eosdem.*"<sup>5</sup>

This law, I believe, was Magna Charta, with some slight changes. If we take these seventy-seven tenants to have been heads of families, they will represent a population of between 300 and 400, forming a community of some importance in a country so thinly peopled as Ireland then was. Many of the names mentioned are still to be found in the neighbourhood: amongst them are Wyn, Kasse (now Cash), and Cotte. A farmer bearing the last name lives not far from my house, a thrifty, hard-working man, with an unmistakably Saxon face.

No information as to the occupation of these settlers can be derived from the Roll, except that a few of them were *biatache* or farmers, and "*adscripti glebae.*" "*Quiquidem burgenses sunt betagii, quare non possunt ire ex villa nisi facere pasturam super terras dominicas domini, quaequidem terras jacent et claudunt burgagium usque villam.*"<sup>6</sup>

With regard to the great body of the colonists, it is evident that they must have had some other industry, and I think a clue to its nature may be obtained from Smith's *History of Cork*. He knew nothing whatever of the history of Kilmaclenine and its colony, but in enumerating the mineral productions of the county, which would afford industrial employment, if taken advantage of, he notices a deposit of ochre there. This is situated at the place where there is little doubt the village stood, and it attracts the visitor's attention by its bright colour wherever the soil is exposed. Smith's words are—"A pale yellow ochre comes from Kilmaclenan, near Doneraile, where there is plenty of it; it turns to a brick colour, and is used by the glovers and skinnners of that neighbourhood."<sup>7</sup> Now as the chief, if not the only, export trade of Ireland in early times was that in hides, it is not an improbable conjecture that this deposit suggested the introduction of a colony of tanners and workers in leather, who could take advantage of it, and carry on a profitable industry. The village was probably built of wood, for timber was abundant; to the north and west stretched the great forest (*coill moyn*) from which the barony (Kilmore) takes its name, and not far from the village, some

<sup>5</sup> *Pipa*, p. 17.

<sup>6</sup> *Ibid.*, p. 18.

<sup>7</sup> *The Antient and Present State of the County and City of Cork*, vol. ii., p. 369.

fields are still known as "the feays," evidently the same word as "the feus" of Armagh, and representing the Irish, *ṛíóð*, "woods." Such a village would soon disappear when deserted by its inhabitants, and the only traces of it now remaining are the Mote and the Church, which, being built of stone, have survived, though much injured by time and the violence of man.

The enclosure known as "The Mote" is a solid wall crowning the summit of a limestone rock (Plate VII.), which rises abruptly from the plain to a height of about forty feet, like a miniature copy of the Rock of Cashel. At the eastern end, where the sides are precipitous, it has been enclosed by a wall about eight feet high, the area within being 128' 10" × 105' 4". The wall is 3' 9" thick. There is now no proper entrance, and access to the interior is obtained by a breach in the western wall. The entrance seems to have been at the east, and was evidently cut away when the rock was quarried at that part, some centuries ago, on the building of the modern castle of Kilmaclenine, which stands about fifty yards off. Two projecting bastions, having small windows at the side, command the face of the north wall and the supposed entrance.

This little fortress is termed in the Roll the "castrum," the primitive name of the rock being given simply as "le carryg," so called before any building was erected on it.

Here it was that the bishops of Cloyne resided when in this part of the diocese, and here they held their court and received the homage of such of the tenants of the See estates as were resident in the neighbourhood. Thus such entries as the following are frequent:—*David Barry cognovit se tenere de domino Episcopo et castro de Kylmaclenyn castellum suum de Bothon*<sup>9</sup> (Buttevant). Again, "*Dominus Johannes Rochford miles apud Kylmaclenyn in curia fecit domino homagium*,"<sup>10</sup> and so on. But while to the bishop it was the "castrum," his "fortified residence," it served a different purpose to the colonists, and was known to them by a different name. It was the place where they held their assemblies, and the Provost and burgesses transacted the business of the settlement. In Spenser's *State of Ireland* occurs a dialogue in which *Eudoxus* says, "These round hills and square bawns which you see so strongly entrenched and thrown up were (they say) at first ordained for the same purpose, that people might assemble themselves therein, and therefore anciently they were called *folknotes*, that is, a place of people to meet or talke of anything that concerned any difference between parties and townships." *Irenaeus* replies: "Those hills whereof you speak were appointed for two special uses, and built by two several nations. These *folknotes* were built by the Saxons, as the word bewraeth, for it signifieth in Saxon a meeting of folk; and these are for the most part in form four-square, well entrenched."<sup>10</sup> This use of the enclosure is evidently the origin of the name "Mote," which has survived the destruction of the village, being that by which the peasantry designate it at the present day.

<sup>9</sup> *Pipa*, p. 12.

<sup>9</sup> *Ib.*, p. 23.

<sup>10</sup> *View of the State of Ireland*, pp. 127, 128.

About two hundred yards off is the ruined church of Kilmaclenine, which, like the castrum, belongs to the thirteenth or fourteenth century. Its dimensions are—length, 49' 4"; breadth, 23'; thickness of walls, 3' 8". The chancel is 10' 3" by 12' 4". The west and south walls are standing, the former clad with a mantle of ivy springing from massive roots, evidently of great age. All the cut stone, if it had any, has disappeared, and the building is a mere wreck. By its side is the ancient graveyard, referred to in the Roll as the "cimiterium," where "the rude forefathers of the hamlet sleep." It is unenclosed, and only distinguishable from the rest of the field by some rude stones buried in moss. It has been long disused.

From the few allusions in the Roll it would appear that the village was near the church—as we might have supposed—and perhaps a little to the south-east of it, where there is a deep well, lined with stone, and reached by a flight of ten steps. This could not have been intended for the convenience of any of the present inhabitants. Close to this I picked up a broken quern, on a late visit to the spot. The foundation of this village must have taken place before 1238, the year in which Bishop David, who made the grant, was translated from Cloyne to Cashel; it must therefore be assigned at latest to 1237, that is, sixty-five years after the Conquest, and it was probably one of the earliest attempts to introduce industrial employment here, where the people had hardly emerged from the pastoral stage. The enterprise was of advantage, not only to the country generally, but specially to the Church, for these industrious colonists paid a considerable rent. This appears from the fact that while the rental of the extensive estates of the See was only £6 4s., the village paid £2 18s. 9d., or nearly half as much. The estates were seventeen in number, and would now be of enormous value. The moral support which the burgesses gave their lord was also of no small importance, for he seems to have been at times in a position of complete isolation. The native Irish are only recognised in the Roll as "*puri homines S<sup>i</sup> Colmani.*" What this meant is explained in the following passage:—"dominus potest omnes istos et filios et filias eorum in omnibus locis capere et bona eorum seysire, et eos vendere,"<sup>11</sup> &c. The Anglo-Norman nobles, on the other hand, who succeeded the original chieftains as tenants of the Church lands, paid their rents with the utmost reluctance, and sometimes not at all. They were quite ready to come to Kilmaclenine, and do homage and promise to pay, but that was all. To take one instance in 1364:—"Dominus William Cogan cognovit se tenere de domino et de dicto castro villam de Balaghath (Ballyhay),"<sup>12</sup> at a rent of 6s. 8d. In 1368, a jury empanelled at Kilmaclenine find, that William Cogan "*fecit defaultam,*"<sup>13</sup> and many others with him. Finally, in a rental at the end of the Roll we find his rent set down at 40d.,<sup>14</sup> exactly half, having been reduced, we may presume, in the hope of inducing him to

<sup>11</sup> *Pipa*, p. 8.<sup>12</sup> *Ib.*, p. 13.<sup>13</sup> *Ib.*, p. 23.<sup>14</sup> *Ib.* 49.

pay. In the same rental O'Henwonhan (Noonan) of Tullylease, one of the few chieftains who retained their position as tenants of Church land, is set down as holding but one carrucate of land, whereas at the earlier date, 1364, his predecessor, Donald, "*cognovit se tenere de Domino Tullales totam integram quæ continet in se septem carrucatas terræ.*"<sup>15</sup>

Evidently the bishop's temper must have been tried with his tenants, but worst of all was the doubt which was raised as to his title. The burgesses, not satisfied with the original grant of Bishop David, sought a confirmation of it from Bishop Daniel (1249), who accordingly executed an elaborate deed of confirmation which many witnesses attested. This was further confirmed by the Dean of Cloyne, Magister Gilbertus, and the "*major et senior pars capituli,*" and the deed sealed with their common seal. But the bishop's constant difficulty was with Barry of Kilmaclenine, who occupied in later times the modern castle which I have mentioned. Each seems to have claimed the chief lordship of the estate, and here the burgesses came to the bishop's aid, as we see by an entry of the finding of a jury of eight burgesses with the provost: "*qui dicunt per sacramentum quod dominus Episcopus Clonensis est capitalis dominus de Kylmaclenyn et quod nullus dominus est ibidem nisi solus Episcopus.*"<sup>16</sup> The Roll is silent as to his opponent, but the omission is supplied by a slab, which was found some years ago at a considerable depth in Mallow churchyard, and has been since built into the wall for preservation. It contains the following inscription in uncial characters much contracted:—"Hic jacet Jacobus filius Wilhelmi de barry in temporalibus dominus de Kylmaclenyn." This posthumous assertion of his right shows exactly what the point in dispute was. The date is supposed to be the beginning of the fifteenth century.

When the colony was established, and all the bishop's plans carried out, Kilmaclenine must have been an interesting spot. A spectator, looking from the high ground near the ancient tomb, would see to his left the primæval forest extending as far as the eye could reach; to the north; about five miles off, the bluff head-land of Ceann Abhra (now Ballyhoura) stood out; eastward from it ran the long range of Sliabh Caein, famous in Irish history, closing in the horizon like a wall, and broken only by the deep cleft known to colonists as "the Red Share," and to the natives as *Deapna rōla*, "the Pass of Blood."

Beneath in the valley were the buildings of the new colony—the Mote perched on its lofty crag, the little church where the villagers worshipped, the wooden houses in which they lived—all was fresh and new, and the future was full of hope. On every side the hum of industry arose—the villagers were busy plying their trades; the biatachs pasturing their flocks and herds on the "*terras dominicas domini,*" or, according to the season, sowing the bishop's "*semen hyemale* or *quadragesimalis*," or "*tassantes et sarculantes bladum domini*"; the bishop's

<sup>15</sup> *Pipa.*

<sup>16</sup> *Id.*, p. 15.

messengers going to and fro "*portantes literas domini*"; the village packhorses bearing the bishop's "wine, salt, and iron"; and then the lords and gentlemen with their train of attendants arriving to do homage, and promising "*tactis sacrosanctis Evangeliiis*" that they will surely pay in future. Everything seemed hopeful.

But all were strangers in a strange land; and meanwhile the native Irish, having no part in the new enterprise, lay hidden in the woods and fastnesses, waiting their opportunity, as we shall see presently, to break forth with fire and sword, content if only they could destroy.

How long the village continued to exist does not appear from the Roll, but it was evidently flourishing in 1364, when Bishop Swaffham commenced the *Pipa*, and entered all previous documents in it for preservation. This was 127 years from its foundation. Shortly after this occurred an event which must have had a disastrous effect in the colony. It is thus recorded in the *Annals of the Four Masters* at A. D. 1382:—"A plundering army was led by Murrough O'Brien into Desmond, and totally devastated it." This brief entry is expanded by Spenser as follows:—"One of the O'Briens, called Murrough en Ranagh, that is, Morrice of the Ferne or wild waste places, who, gathering unto him all the reliques of the discontented Irish, eftsoones surprised the castle of Clare . . . whence shortly breaking forth like a sudden tempest, he overran all Mounster and Connaught, breaking down all the holds and fortresses of the English, defacing and utterly subverting all corporate towns that were not strongly walled . . . so that in short space of time he clean wyped out many great towns, as first Inchiquin, then Killaloe, Mourne, Buttevant, and many others whose names I cannot remember, and of some of which there is now no memory remaining."<sup>17</sup>

Now, as Kilmaclenine is only three miles from Buttevant, it was evidently one of those settlements whose names he had forgotten, which were "wyped out" by Murrough and his wood-kernes.

The destruction, however, was not final. The villagers, no doubt, fled at the approach of the wild invaders, and their village was reduced to ashes; but when the storm passed over they seem to have returned, rebuilt their log huts, and attempted again to resume their industry.

But now a more formidable danger threatened them than Murrough's wild raid, for the Anglo-Norman nobles and gentry had begun to adopt Irish customs, and to practise exactions of the like kind to those which the old chieftains had imposed, but much more severe, and this not only on the tenants but on the bishop himself.

In this emergency the bishop endeavoured to protect himself and his property by entering into an agreement with three of the principal nobles in his diocese. In Cloyne, with "Jacobus le Botiller, Comes Ormond," who was joint proprietor with the bishop of the barony of

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<sup>17</sup> Spenser, p. 24.

Inchiquin; in Fermoy, with the "*nobilis vir Mauritius de Rupe dominus de Fermoy*"; and at Kilmaclennine with Sir Philip Barry, "*dominus de Olethan et Muscrydonygan*." In this covenant, which is the same as the others, Barry undertakes that he will not in future by himself or others in his name impose "*bonys cowys guidagia vel podagia super castrum et dominium de Kylmaclennyn, ac tenentes in eisdem permanentes seu commorantes, et quoad burgenses dictæ villæ de Kylmaclennyn, promissit ut supra, quod minime ponet onera illicita super eos*," &c.;<sup>18</sup> and he is willing, if he breaks this promise (*quod absit!*), that the bishop should excommunicate him, and suppress his house within the diocese by an interdict.

One can easily see how these terrible exactions of *bonacht* and *cuid-eidhe*, and others too numerous to mention, classed simply as "*illicita onera*," must have impoverished the little community. The "*supportacio turbarum et satellitum*," referred to in another place, suggests the lawless rabble who followed in the train of the lord, and like locusts devoured the substance of the villagers. The bishop's power had evidently declined; he was no longer able to protect the burgesses, or even himself; the agreement with the Lord of Olethan was mere waste paper. After this we hear no more of the burgesses, and two years later, in 1406, King Henry IV. has to come to the bishop's aid with all the power of the Crown, which, however, appears to have been small, threatening the "*fili iniquitatis*," who put "*diversas impositiones et illicita onera*" on the bishop and his tenants, and ordering public proclamation to be made against them as rebels.<sup>19</sup> In such a state of things no settled industry was possible; the inhabitants would gradually move away to more peaceful homes, and the village abandoned would quickly decay, and finally disappear.

The next mention of Kilmaclennine is in a visitation book of 1591, that is 185 years later, and it runs thus—" *Ecclesia de Kilm'lenny, locus desertus et vastatus*."<sup>20</sup> Here the name is mis-spelt, and the place seems entirely unknown. One hundred years later, in 1698, the Bishop of Cloyne writes—"The fine estate of Kilmaclennine, with others, was entirely lost by the determination of the Commissioners against the claim of the Church." And so it passed once more into lay hands, and is now the property of Charles Purdon Coote, D.L., after being Church land for 1100 years, and passing through many ecclesiastical changes.

There remain still a few observations to make with respect to Barry of Kilmaclennine. There is a local tradition that at a time not specified, but probably in the seventeenth century, the last of the family rode down in haste to Ballyclough Castle, and asked to see Colonel Purdon. The Colonel was away, and his wife refused

<sup>18</sup> *Fipa*, p. 54.

<sup>19</sup> *Ib.*, p. 59.

<sup>20</sup> MS. T.C.D., E 14, quoted in Brady's *Records of Cork, Cloyne, and Ross*, vol. ii, p. 272.

to see Barry, much to the disappointment of her husband when he heard of it on his return, as he knew that Barry, expecting an attainer, had come to sell his interest in Kilmaclenine.

Failing to see anyone at Ballyclough, he rode on to Blarney Castle, where he disposed of his interest to the proprietor. This was afterwards sold by the Jeffreys family, and has been since bought in by Mr. Coote, and thus the divided ownership, which had continued for six centuries, has come to an end. The fact of such an interest or chief rent remaining after the property had passed from the bishop may perhaps lead to the suspicion that Barry had the best of the contest with him, and was entitled to have himself described on his tombstone as "*in temporalibus dominus de Kilmaclenine.*"

The parish is now indeed waste and desert as to its Mote, its church, and its village, but otherwise it is as of old, when the territory to which it belongs was described by O'Heerin:—

"The territory of O'Donnegáin certainly  
Is the Great Muscraighe of Three Plains  
With the host of the flock abounding Iarann—  
Host of the sunny land of vowed deeds."

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XXVII.—ON TWO COLLECTIONS OF MEDIEVAL MORALIZED TALES. By  
JOHN K. INGRAM, LL.D.

[Read 10th April, 1882.]

It is well known to students of the literature of the middle ages that the clergy of that period often introduced stories and anecdotes into their discourses, as indeed modern preachers also occasionally do, for the purpose of impressing religious and moral truth on the minds of their hearers. To furnish materials of this kind, compilations were made, in the Latin language, of narratives capable of being so used, with moralizations, as they were called, given in connexion with each. These tales are sometimes elevated in tone, and touching, from the spirit of simple-minded and earnest piety which is exhibited in them. At other times they seem to us strangely incongruous with the sacred destination for which they were intended; and not seldom an extraordinary degree of ingenuity has to be exercised by the narrator to extract from them lessons which they do not appear inherently well fitted to convey. But, in both cases alike, they are not only in themselves curious and interesting, but they give us a good deal of insight into the ideas, sentiments, and modes of action prevalent at the time of their compilation. And this all the more because they are essentially popular in their nature—meant, indeed, for the use of ecclesiastics, but by them to be addressed to the minds of the people at large, and therefore adapted to their modes of thinking and feeling.

The most famous collection of this kind is the *Gesta Romanorum*. This book, which dates from the end of the thirteenth or early years of the fourteenth century, had an immense vogue, and exerted no inconsiderable influence on European literature. For the critical edition of it by Oesterley, no fewer than one hundred and sixty-five MSS. were examined. An English version of the *Gesta* was printed by Wynkyn de Worde about 1510–1515, and many editions of this were afterwards published. It was edited by Sir Frederic Madden, with much learned illustration, for the Roxburghe Club, in 1838; and his edition has been reproduced, with large additional preface matter and comment, by Mr. Sidney Herbage for the Early English Text Society.

All scholars are aware how largely the *Gesta* has supplied materials which have through various channels passed into general literature, and been used by Shakspeare and other eminent writers in some of their most celebrated works.

The two books which I exhibit this evening to the Academy are of similar character to the *Gesta*, being collections of Latin Moralized Tales. But they are not of equal intrinsic merit with that work, and on general literature they have had no operation at all. Yet



they are, I believe, of very great interest. They appear to be quite unknown to—they are at least entirely unnoticed by—writers on this branch of Medieval Literature. Sir Frederic Madden, in the very full account he has given of compilations of this kind, makes no mention of either, nor are they referred to by Mr. Wright, who brought out a selection of stories of the same kind as they contain, gathered from several different sources, under the auspices of the Percy Society, in 1842. I have sent a description of these collections to Mr. Herbage, who has had occasion to examine the various extant MSS. containing similar matter, in preparing his edition of the English *Gesta*, and he has informed me that he is quite unacquainted with them, and has never met with, or heard of, a copy of either.

Both the volumes which lie on the table were placed in my hands by my friend the Very Rev. John Gwynn, Dean of Raphoe, formerly Fellow of Trinity College. They belong to the Diocesan Library, Derry. They were submitted to the late Rev. J. H. Todd in 1849, and he wrote descriptive notes on them, which have been preserved, and which I proceed to give in full.

His description of the larger volume is as follows:—

“This is a very curious and valuable MS., written about the middle of the fourteenth century. It is divided into two parts. Part I. ends on fol. xci., and is followed, fol. xcii., by an index of the chapters. The second part begins on the next leaf, and has the following heading:—

“‘Terminata prima parte exemplorum in moralibus per narrationes et materias diversas. Sequitur secunda pars exemplorum in moralibus naturalibus et artificialibus secundum alphabetum prout in literis et vocalibus in concordantiis fieri solet et conscribi.’

“Under which, in a different and somewhat later hand, is the following interesting historical note:—

“‘Memorandum est et firmiter memoriæ tradendum de quadam strage patrata per Donaldum Mathgnis prope castrum viride quinto die mensis Julii Anno Domini millesimo quadringentesimo nonagesimo septimo ac cicli solaris anno quinto, necnon et cicli xix<sup>to</sup> sexto decimo. Qua quidem strage mortem subierunt nobilis Tebaldus Verdon ac famosus Bernardus Magmawne tunc temporis suae nationis capitaneus.’

“[The *Annals of Ulster* mention this event under the same day and year, 1497. But they represent Brian Mac Mahon, who was killed in the conflict, as the aggressor. They say he was instigated by Seffin Fait [Geoffrey White] to attack Magenis, and drive him and his sons from the Castle of Oirenach. The predecessor of this Brian [or Bernardus] Mac Mahon was the first chief of the Mac Mahons who joined the English. See O'Donovan, *Four Masters*, p. 1225.]

“The author of this curious work is not (as far as I have discovered) named in any part of it, and I am not aware that it has ever been printed. The first part is divided into chapters, under heads such as the following:—

“De superbia, et presumptione, et extollentia sui, et humilitate et patientia bona.’

“De iracundia et blasphemis et perjuris, et invidia fraternæ gratiæ.’

“De liberalitate et humanitate et patientia et crudelitate principum.’

&c., &c.

“Under each head curious anecdotes are given, tending to set forth the dangers of vice and the advantages of the several virtues or graces. The following example occurs (fol 49) in the section headed ‘De memoria mortis et mundi contemptu.’ I select it chiefly because it is short:—

“Fuit quidam nobilis princeps adhuc infidelis, qui cum videret et per signa evidentia cognosceret se appropinquare ad mortem, fecit sudarium quo debuit sepeliri explicatum portari per villam. Et clamabat prece valenter, Ego cum sim dominus multarum regionum, hoc solum porto mecum de tota substantia mea et gloria mundi. Ideo providete vobis ut bona opera facta in vita vos inseparabiliter comitentur. Cum interierit homo, non sumet omnia, neque descendet cum eo gloria ejus.’

“The second part is written in a different hand from the first: it is arranged in alphabetical order, and the subjects are illustrated not by stories or anecdotes, but by sentences quoted apparently from various authors. As a specimen of the contents of this part of the work, I transcribe some of the headings:—

Abstinencia.  
Accidia.  
Angelus.  
Anima.  
Advocati.  
Avaricia.

Ballivus.  
Beatitudo.  
Bellum.  
Caritas,  
&c., &c.

“This part is imperfect, some leaves being lost at the end of the volume. It ends with the word *Mundus*, the illustrations of which are imperfect on the last page—ending with the word *verberabitur*.

“On the upper margin of the first leaf, in a hand of the fifteenth century, the title of the book is thus given by some ancient librarian:

“Incipit prima pars Exemplorum in moralibus per narraciones, &c.

“Sequitur secunda pars Exemplorum in moralibus naturalibus. . . . Inferius prope finem.’

“On the lower margin are the old library marks—

Px. 62 }  
Nº. 39 } Derry.

"There are two very interesting and valuable leaves—one at the beginning of the volume, the other at the end—which were pasted on the wooden binding. They are fragments of the ancient 'Lectionarium' of the English Church, and ought to be carefully preserved, as they are extremely curious. They appear to be as old as the twelfth century.

"J. H. T.

"TRINITY COLLEGE, DUBLIN.

"*All Saints' Day*, 1849."

So far Dr. Todd; and there is not much to be added to what he has said. The entire volume, it should be mentioned, is of parchment. A note is pasted within the cover containing the words "Called in the catalogue Harison's Manuscript." The second portion of the volume, it will be seen, is of less interest than the first, being a mere moral treatise, which appears, from such examination as I have made of it, to be as dull as moral treatises too often are. It is the first portion that is valuable, as containing a great body of moralized tales.

That the moral treatise, which occupies the second part of the volume, was written in England, seems certain from the quotation in it of the following English verses, accompanied by a translation (or paraphrase) in Norman-French:—

' . . . quod Anglice dicitur  
 Whan þe nyþyng is ded and lyþ by þ' wowe  
 Comeþ a prout ȝong man and woȝeþ his love  
 Drynkeþ of his broun ale and et of his lhowe  
 And singeþ for his saule gyvelgove.

Quant ly avers est mort et gyt south la bere  
 Vient un ioefne bacheler e daunye sa bele  
 Boyt de sou bone vyne e mouit sa sele  
 Et chaunt p' salme va la ly durele.'

The leaves which formed part of the binding appear to be a portion of an ancient Breviary. I have not been able to identify it with any other of the many existing forms of Breviary. I print it in full in Appendix B to the present Paper, and leave it to the study of better Liturgiologists than myself.

The other volume on the table, which is of paper, with leaves of parchment interspersed here and there, is made up of a large number of different pieces. They were in part described by Dr. Todd as follows:—

"CONTENTS OF THIS VOLUME.

"1. Hic incipiunt decem mandata que bene declarantur.

"A [commentary on the Ten Commandments.]

- "2. Haec sunt privilegia diei Veneris.

"[Remarkable events which happened on Friday, and the reasons for fasting on that day.]

- "3. Pater noster.

"[A commentary on the Lord's Prayer.]

- "4. Credo in Deum.

"[A commentary on the Creed.]

- "5. A tract beginning: 'In Hibernia primum predicavit beatus Patricius verbum Christi.'

"[This is a very curious tract. It mentions at the beginning that our Lord appeared to St. Patrick, and gave him two precious gifts, viz., a copy of the Gospels, and a staff—both which (says the author) are preserved in Ireland to this day. It then goes on to describe St. Patrick's Purgatory, and the visions of an English knight, who entered it in the reign of King Stephen.

"This is no doubt the 'History of the Knight' mentioned in the *Annals of Ulster* at A. D. 1497. See O'Donovan's *Four Masters*, p. 1238, note.]<sup>1</sup>

- "6. 'Iste liber est qui docet vivere perfecte, et est nominatus speculum Sancti Edmundi Confessoris.'

"[This work is printed in the Lyons Biblioth. Patrum: vol. xxv., p. 316. It is sometimes called 'Speculum Ecclesiæ.' This copy differs a good deal in various readings from the printed editions.]

"St Edmund was Abp. of Canterbury, and died A. D. 1246.

- "7. 'Utilitates missæ: et sex causæ inductionis contritionis. De sero penitentibus.'

"[Here a page and a half are blank.]

- "8. 'Hic incipit tractatus beati Roberti Lincolnensis Episcopi de penis purgatorii.'

"[This work was never printed. It is by Robert Grossthead, *alias* Copley, Bp. of Lincoln, A. D. 1230.

"~~§~~ This tract ends thus: 'De quo dolore nos defendat qui sine fine vivit et imperat. Amen q<sup>d</sup> do<sup>s</sup> Johannes Ardyslay.'

"This John Ardyslay was therefore probably the transcriber of the volume.]

<sup>1</sup> I have transcribed this tract, though I do not propose to make any use of it in the present Paper. It is in substance the same with the story of the "Miles," told in Messingham's *Florilegium Insulæ Sanctorum*; but the narrative is given in the Derry volume in very simple and popular language, and without any of the rhetorical amplification which is found in Messingham.—J. K. I.

"9. 'Incipit libellus de miseria conditionis humanæ.' This book begins thus: 'Domino Patri Karissimo Petro Dei gratia Portuensi Episcopo Lotharius indignus diaconus, gratiam in presenti et gloriam in futuro.'

"[This work is by Lothaire, afterwards Pope Innocent III., written whilst he was only a deacon, and dedicated to Peter, Bp. of Porto. It has been repeatedly printed.]

"10. 'Hic incipit tractatus quidem<sup>2</sup> speculum sive lumen laycorum.'"

Here ends Dr. Todd's description, which is accurate, except that he has omitted to mention short notes on the *Ave Maria* and on the celestial spheres. He has said nothing of the *Speculum Laicorum* beyond giving its title, and yet it forms the main interest of the volume, of which it occupies one hundred and forty-four folios, or about two-thirds of the whole. I cannot doubt that he had intended to examine it carefully, and was prevented by some interruption from carrying the purpose into effect.

Before returning to the *Speculum*, I may mention the remaining contents of the volume. At the close of that treatise we have the words, 'Hic incipit liber qui vocatur Ancelmus [*sic*] de morte,' and at the end of this piece comes another with the heading, 'Hæc sunt revelaciones Jhesu Christi domini nostri. Verba quæ revelavit dominus Jhesus Christus servo suo nomine Alberto archiepiscopo civitatis Collonensis.' With the conclusion of this piece the volume ends.

Coming back to the *Speculum*, we find it to contain a vast body of moralized tales and anecdotes. Another copy of it, occupying the whole of a ms. volume of one hundred and thirty-three leaves of parchment, exists in the Library of Trinity College, Dublin, very superior to the Derry volume in correctness of transcription and finish of execution, as well as earlier in date. It is written in a beautiful hand of the early part of the fifteenth century, and many of the initial letters are gilt or illuminated. Whether any third copy of the work is extant, I cannot positively state; but, as I have said, the best authorities do not mention any such. Mason, in preparing his Catalogue of the Trinity College mss., saw that the Dublin copy of the *Speculum* wants a leaf at the beginning; the contents of this are now supplied by the Derry copy. The leaf contained a curious preface in which the author states the motives which led him to compose the work<sup>3</sup>, and

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<sup>2</sup> Rather *qui dicitur*.—J. K. I.

<sup>3</sup> The following are extracts from the preface:—

"In Christo sibi dilecto quondam scolari et confratri moderno suus et suorum minimus feliciter vivere et in pace mori. Assumptus nuper ad animarum curam, de tui status debito sollicitus, crebris me precibus postulasti quicquam tibi scribere quod instruendis laycis amplius crederem expedire . . . Accipias igitur placide quod munus tibi pauper amicus mittit exiguum. . . . Quoniam, ut dicit apostolus, lacte,

also a part of the table of contents. The subjects successively treated are such as the following :—

- “ de abstinentia vera ficta et stulta.
- “ 2<sup>m</sup>. de adquisitis injuste et eorum periculo.
- “ 3<sup>m</sup>. de advocatis malis et eorum periculo.
- “ 4<sup>m</sup>. de adulterio et malis ejus.
- “ 5<sup>m</sup>. de amore dei et ejus causis.
- “ 6<sup>m</sup>. de amore mundi et ejus fallaciis.
- “ 7<sup>m</sup>. de amore carnali et ejus meritis.
- “ 8<sup>m</sup>. de amicitia vera et ficta.
- “ 9<sup>m</sup>. de apostatis et eorum periculis.
- “ 10<sup>m</sup>. de avaritia et ejus effectibus.”

And so on through the entire alphabetical series.

The materials of the work are borrowed from a great variety of authors. The classical writers of antiquity are but little quoted; there are references to Aristotle—some of whose works were known through Latin versions—to Cicero, Horace, Valerius Maximus, and Seneca. But the sources on which the compiler has drawn most largely are the writings of St. Augustine, especially the *De Civitate Dei*, the *Historia Tripartita* of Cassiodorus, the Dialogues of St. Gregory, the collection known as *Vitas Patrum*, the curious treatise entitled *Barlaam and Josaphat*, various Lives of Saints, the *Disciplina Clericalis* of Petrus Alfonsus, and the works of St. Isidore of Seville, of Bede, of Jacobus de Vitriaco, of Peter of Clugny (otherwise known as Peter the Venerable), and of Jacobus de Voragine, author of the *Legenda Aurea*. I have met one reference to the *Gesta Romanorum*,<sup>4</sup> but I cannot find the corresponding story in that collection, and I believe that the writer means to designate by the words not the body of tales so named, but Roman history in general, just as elsewhere he has “*Gesta Francorum*” for the history of the Franks. Some of the narratives appear to have been taken, not from books, but from popular rumour or tradition, commencing as they do with *Fertur* simply. In the moralizations very large use is made of the Old and New Testament, with the text of which the compiler seems to have been thoroughly familiar.

The book appears to have been written by an English author. This is made probable by the great number of tales relating to English personages and localities; it is *proved*, I think, by one story (in the

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non cibo solido, nutriendi sunt in scientia debiles et in fide rudes, ne, dum duriora sument, edentuli prius intereant quam pascantur, ego de simplicium numero minimus ad honorem dei eruditionemque rudium e sanctorum patrum et doctorum legendis et scriptis temporumque præteritorum ac modernorum quibusdam eventibus exemplisque naturalibus non margaritas sed aliquas [? siliquas] collegi quasi pectoribus. . . .”

<sup>4</sup> See Tale VIII. in Appendix A.

section De Prelatis) in which the writer—in this, as is well known, representing the English feeling of the time—strongly takes part with Grosseteste, Bishop of Lincoln, in his contest with Pope Innocent IV.

That the Derry volume containing the *Speculum* was once the property of a religious house is rendered highly probable by the following words written at the head of the verso of folio 10:—

“Or. miserere quæsumus, domine, animabus omnium benefactorum nostrorum defunctorum, et pro beneficiis quæ nobis lergiti [*sic*] sunt in terris, præmia eterna consequantur in celis.”

The Trinity College copy of the *Speculum* has the following at the end:—

“Explicit tractatus Speculum Laicorum nuncupatus  
Laus tibi Christe; liber jam explicit iste.

Burbage Scriptor.”

Burbage was doubtless not the author of the work, but the transcriber of that copy.<sup>5</sup>

I have extracted a number of the tales both from the *Speculum* and from the larger Derry volume (which, for brevity, may be called the *Exempla*), and had intended to read them to-night. But it would be impossible for the members of the Academy to follow the Latin—sometimes crabbed or peculiar, in which the books are written—when thus read; and, if translated into modern English, the stories would lose much of their freshness and quaintness. I purpose therefore, with the permission of the Academy, to print in the *Proceedings* a few specimens of the tales, and I think I can promise that they will be found curious and entertaining. The *Speculum* especially, which I have studied more closely than the other collection, appears to me very interesting. It is scarcely too much to say that we have in it a Popular Moral Encyclopædia of the Fourteenth century. I think scholars would welcome an edition of it, and I will conclude by recommending it to the attention of any publishing society which occupies itself with Latin Medieval Literature.

<sup>5</sup> In the cover of the smaller Derry volume (as in that of the larger) two leaves were inserted. These have been preserved. They are filled with matter in a handwriting probably of the thirteenth century. On reading this, I at once conjectured that it was a part of the life of Becket by Herbert de Bosham—and I guessed that it might be a fragment of the lost portion of that work. I was right in my conjecture as to the book from which the leaves came, and my further expectations were not far from being realized. For some of the matter contained in them has been lost out of both the two extant ms. copies of de Bosham's work; but this matter had been supplied by Dr. Giles in 1841 from an abridged form of the Life, preserved in the Philipps collection. The passage contained in the leaves is that which appears in pp. 253–255 of vol. iii. of Canon Robertson's *Materials for the History of Becket*, describing the reception and behaviour of the Archbishop at the Council of Tours.

## APPENDIX A.

The following tales have been chosen with a view to variety of source and of character. Where it is not otherwise indicated, the tale is taken from the *Speculum Laicorum*. I have not thought it necessary to adhere strictly to the spelling and punctuation of the original.

## I.

Legitur in vita Sancti Ignacii quod cum ipse staret coram tyranno nomen Ihesum instanter nominans, quaesivit ab eo tyrannus cur nomen tam crebro nominaret. Respondit sanctus, quia scriptum est in corde meo, ideo non potest cessare ab ore. Tyrannus volens hoc certius probare occidit eum et investigans cor invenit in ejus corde scriptum litteris aureis, Ihesus est amor meus. Iste sanctus potuit competenter dicere cum beato Paulo illud, Act. 21: non solum alligari sed mori paratus sum propter nomen domini Ihesu Christi. Verum Bernardus super Canticis, Ihesus mel in ore, melos in aure, jubilus in corde.

## II.

Refert idem Petrus quod duo fuerunt mercatores, quorum unus erat Egyptius alter vero Anglicus, qui nunquam se mutuo viderant, vinculo tamen maximae dilectionis jungebantur, ita quod quicquid alter ab altero voluerat per intervenientes reportaretur. Cumque itaque diutius agerentur, contigit Anglicum in Egyptum velle progredi causa suum amicum videndi. Venit itaque illuc et ab amico suo gaudenter recipitur, postque octo dies graviter infirmatur. Egyptius contristatur, medicus adducitur, pulsus et urina considerantur, nihil febrium vel infirmitatis alterius invenitur. amore languere comprobatur. Sciscitatur Egyptius ab infirmo quam amet, et respondet, 'Mulieris cujusdam amore langueo quam in domo tua vidi; quae tamen illa sit vel quod nomen habeat, penitus ignoro; quam nisi amplexatus fuero, scias me sine remedio moriturum. Adducuntur igitur coram eo omnes mulieres quae fuerant in domo Egyptii. inter quas erat quaedam pulcherrima, qua visa recedit languidus, et recuperato spiritu suspirans ait, Haec est causa meae aegritudinis, haec et esse poterit causa meae sanitatis. Quo audito, Egyptius puellam illam quam in proprium conjugium nutrierat, amico suo tradidit in uxorem, remeavitque Anglicus ille ad propria cum uxore sua. Posthac autem Egyptius ille ad summam devenit paupertatem ita ut victum quaereret ostiatim. confususque recessit a propriis et in Angliam pervenit et cum ad villam perveniret in qua degit amicus ejus recepit se sub divo fame et frigore cruciatus, dicens intra se, Heu mihi misero quia in tantam perveni miseriam ut hospitium non inveni quo tegar hoc nocte, et si amicum meum inveniam, mei non habebit notitiam, tantam in me videns paupertatem. Divertit itaque se ad vicinam ecclesiam, in ea



permansurus usque mane. Contigitque ea nocte quemdam de concivibus alium occidisse et usque eandem ecclesiam confugisse, quem insequentes ceteri concives invenerunt Egyptium illum in ecclesia. Quæerunt ab eo quo devenisset homicida. At ille tædium habens vitæ suæ, ait, Ego sum qui occidi eum. Capitur itaque et judici præsentatur. Affuitque inter ceteros amicus ejus, et recognoscens clamans dixit, Injuste judicatis hominem istum; ego homicidium istum perpetravi. Capitur igitur ille et condemnatur. Cum igitur ad tam stupendum spectaculum plures de civibus confluiscent, advenit et ille homicida, et videns duos innocentes pro suo reatu condemnari, confitebatur commissum suum, malens juste puniri quam se non punito alios pro suo facto minus juste suspendi. Mirantibus itaque iudice cum astantibus et planius rei rectitudinem indagantibus reperierunt unum amicorum penuria, alium amoris constantia devictum iudicium subiisse, ipsosque non sine laudibus absolventes, homicidam verum suspenderunt. Accipiens igitur Anglicus Egyptium medietatem omnem ei dedit suorum et ditatum amplissime ad sua remisit in pace.<sup>6</sup>

### III.

Senescallus cujusdam comitis in Anglia ita fuerat durus pauperibus tenentibus domini sui quod eos falsis accusationibus et extorsionibus penitus destruxit. Mortuusque est, ostensusque uni tenentium ipsorum in spiritu in collobio nigro linguam suam emittens et [manu propria rasorio particulatim scindens et particulas ipsas in os suum projiciens et iterato linguam integram emittens et scindens] et sic continuo faciens. Requisitus igitur quis esset, respondit quod Senescallus ille qui nuper ipsum et ceteros tenentes domini sui vexavit injuste. Addiditque quod illam passionem sustinuit in lingua propter injurias implacitationes quas pauperibus frequentius movebat. Sublevans collobium, apparuit corpus suum quasi ferrum ignitum.

Instead of the shocking description within the brackets, given in the Derry ms., appears in the Dublin ms. the single word "incidens."

### IV.—(From the EXEMPLA.)

Fuit quidam praepositus in Leycestria qui avaritia exaestuans non cessavit injuste pecuniam ab hiis quibus praeiit extorquere. Quadam autem die in solario domus suæ se includens coepit quasi luctando cum aliquo tumultum magnum facere. Facta est interim vox cuidam ejus servienti dicens, Vade et dic domino tuo quod venio accipere quod

<sup>6</sup> This story is taken from the *Disciplina Clericalis* of Petrus Alfonsus, but with changes, the principal of which is the substitution of an English merchant for one of "Baldach," which means "Bagdad" (an alteration which, as Dean Gwynn has remarked to me, confirms my opinion as to the English origin of the *Speculum*.) It is also told, but not in the same words as here, in the *Gesta Romanorum*, cap. 171, and in Herolt, *Sermones de Temp.*, 120.

mihī debetur. Cumque ille vellet ingredi ad dominum suum, coepit dominus defendere ingressum. Qui adquisito adiutorio violenter ingressus solarium. Quod videns praepositus, continuo seipsum jugulavit, et manibus propriis divisas partes gutturis atrociter decerpit; et sic infelicitē vitam finivit.

V.—(*From the EXEMPLA.*)<sup>1</sup>

Narrat Valerius quod quaedam vetula adorabat deos et eisdem sacrificia offerebat pro longa vita Dionysii tyranni. A qua cum ille quaereret quo merito suo hoc faceret, respondit vetula et ait, Cum eram puella et gravem haberemus tyrannum, optabamus quod moretur. Quo mortuo successit tetrior arcem dominationis ejus occupans. Successit et tertius peior et crudelior primis. Successisti et tu quartus, importunior et importabilior aliis. Timens itaque ne, si tu fueris assumptus, post te locum tuum crudelior teneat et tibi in dignitate succedat, [quare] caput meum cotidie diis pro salute tua devoveo. Dionysius autem quamquam tyrannus tam facetam audaciam punire erubuit et vetulam abire permisit.

VI.

Legitur in vita Sti. Brandani quod ei existenti in mari apparuit quaedam anima in nube horrida et tenebrosa flens et dicens, Oro te, pater, in caritate Christi Jhesu ut depreceris pro me misero peccatore per instans triduum misericordiae patrem, quia gravissime torqueor pro meis reatibus in hac nube. Cumque sanctus ejus annuisset precibus, statim disperuit, paterque secundum suam sponsonem per triduum cum fratribus oravit pro eo. Peracto triduo apparuit iterum in nube aliquantulum clariore in parte tamen tenebrosa, dicens, Melius mihi fore sentio, pater, propter orationes vestras. Precor insuper ut persequens triduum rogetis pro me. Quod pater sanctus fecit devote. Septima itaque die apparuit in lucida nube tota munda et fulgida, gratias agens et dicens se ea die in gloriam celestem fuisse deductum. Cui sanctus, Quis es tu et quomodo vocaris? Ad quod illa, Colomanus vocor, et monachus eram iracundus et seminator discordiarum inter fratres, propter quod ita fuero flagellatus.

VII.

Quidam in archiepiscopatu de Dyvelyn<sup>2</sup> cum una die voluisset arcam suam plenam denariis aperire, invenit super eos simiam sedentem et dicentem sibi, "Noli tangere pecuniam istam, quia est Colewyni," i. e. diaboli; nec mirum, quia quod servus acquirit, domino suo acquirit, ut dicitur in jure civili.

<sup>1</sup> This story is taken, though not verbally copied, from Valerius Maximus, lib. vi. cap. 2. It is told also in *Geat Rom.*, 53.

<sup>2</sup> Develyn in *Dubl. ms.*; "Dublin" is meant.

## VIII.

Legitur in gestis Romanorum quod cum quidam juvenis nobilis nomine Lucianus quamdam virginem desponsaret nomine Eugeniam, et post convivium cum sodalibus fuisset ingressus in campum ad spatiandum, anulum suum quem habebat in digito, digito cujusdam statuæ aereae astantis quasi conservandum dum luderet imponebat. Cum ludo satisfecisset et anulum a statua repetisset, digitum ipsum statuæ usque ad volam repperit incurvatum ita quod nec poterat erigi nec anulus ab eo evelli. Recedens ergo damnum anuli dissimulans domum regreditur et in lectulo cum nova conjuge collocatur, et cum operi conjugali dare vellet operam, sensit inter se et conjugem humanam effigiem locatam et dicentem Mecum concumbe quia hodie me desponsasti; ego sum Venus cujus digito anulum imposuisti. Cumque hoc ipsum pluribus noctibus ageretur et uxorem propriam cognoscere prohiberetur, quidam presbyter civitatis nomine Palumbus magicis imbutus artibus requiritur, tumque salarium petitur et praestatur. Dixit itaque presbyter ad juvenem, vade hora noctis ad compitum proximum, et, considerans ibi transientes, quem inter eos ultimum et elegantioris staturae esse perspexeris, illi litteras quas tibi trado meo nomine commenda. Adit igitur juvenis compitum, turbam multam transire conspicit et inter alios mulierem quasi in habitu meretricio mulam equitantem, quæ fuit ipsa Venus, quam quidam quasi collegii magister sequebatur. Cui juvenis litteras protendit a presbytero transmissas, quas cum diabolus ille legisset, brachiis in celum protensis, ait, Omnipotens Deus, quamdiu Palumbi presbyteri nequitias patieris! et hoc dicto, satellites suos ad Venerem dirigit, anulumque ab ea violenter extorsit, et juveni donavit. Palumbus vero ab hora imprecationibus diabolicis finem vitæ sortiens omnia membra sua truncavit et misera morte defunctus est.

## IX.

Quidam nobilis in Anglia, habens terras in Anglia et in Wallia, tres habuit filios, qui, cum morti appropinquare se videret, vocavit tres filios suos et dixit eis, Si necesse fuerit vos aves fieri, quibus avibus velletis assimilari? Cui respondit primogenitus, Ego assimilarer accipitri, quia nobilis avis est et de rapina vivit. Medius autem dixit, Et ego sturno, quia socialis est et turmatim volat. Tertius et junior aliis, Et ego cygno, quia longum collum habet, ut si aliquid dicendum in corde verteretur, bene possem deliberare antequam verbum veniret ad os. Pater autem hæc audiens dixit primo, Tu fili, ut video vivere cupis de raptu, do tibi terras meas in Anglia, quia terra pacis est et justitiæ, et in ea non poteris rapere impune. Tu autem, fili, qui societatem amas, habebis terras meas in Wallia, quæ est terra discordiæ et guerræ, quia per curialitatem malitiam comparabis [?] incolarum. Tibi autem, junior, nullam terram assigno, quia sapiens eris et per sapientiam tuam sufficienter tibi adquires. Mortuo igitur patre dividuntur terræ ut pater prædixerat; frater autem junior, in sapientia proficiens, factus est capitalis justiciarius Angliæ opulentus.

## APPENDIX B.

I have thought it better to print the whole of the matter in these leaves, including the passages of Scripture, on account of the frequent and sometimes curious variations which occur in them from the received text of the Vulgate. What follows is an exact transcript of the words of the original except that contractions are expanded. The Lessons are from I. Maccabees, chap. 6; and Ezekiel, chaps. 1, 2, and 3. The points indicate breaks arising from the leaves having been cut down for use in the binding of the volume.

## [First Leaf.]

cationem sicut prius circumdederunt muris altis sed et Bethsuram civitatem suam.

L. III<sup>a</sup>.

Et factum est ut audivit sermones istos expavit et commotus est valde et procidit in lectum et incidit in lectum et incidit prestitia<sup>9</sup> in languorem, quia non est ei factum sicut cogitabat. Et erat illic diebus multis quum renovata est in eo tristitia magna. Et arbitratus est se mori. Et vocavit omnes amicos suos dixitque illis. Recessit somnus ab oculis meis et concidi et corruui corde præ sollicitudine et dixi in corde meo. In quantam tribulationem deveni et tempestatem magnam in qua nunc sum quia jocundus eram et delicatus in potestate magna.

DOM. V<sup>a</sup>. Lc. I<sup>a</sup>.

Nunc ergo reminiscor malorum quæ feci in Jerusalem, et unde abstuli omnia spolia argentea et aurea quæ erant in ea et misi auferri habitantes Judeam sine causa. Et cognovi quia propter hæc invenerunt me mala ista et ecce pereo tristitia in terra aliena.

## Lc. II.

Et vocavit Pilippum unum de amicis suis. Et præpo . . . . . stolam suam et anulum suum ut adduceret Antiochum filium suum. et nutriret eum ut regnaret. Et mortuus est Antiochus rex illic anno nono et x<sup>o</sup>l: et centesimo.

## LECTIO TERTIA.

Et cognovit Lysias quoniam mortuus est rex, et constituit regnare Antiochum filium ejus quem nurtrivit adolescentiorem et vocavit nomen ejus Eupaton.<sup>10</sup> Et hi qui erant in arce concluserant Israel in circuitu sanctorum et querebant eis mala semper ad firmentum<sup>10</sup> gentium.

<sup>9</sup> Corrected to "præ tristitia."

<sup>10</sup> *Sic.*

LECTIO IIII<sup>a</sup>.

Et cognovit Judas disperdere eos et convocavit universum populum ut obsederent eis. Et convenerunt simul et obsederunt eos anno 1<sup>o</sup> et centesimo et fecerunt balistas et machinas. Et exierunt quidam ex impiis Israel et adjunxerunt se illis. et abierunt ad regem et dixerunt Quousque non facis judicium et vindicas fratres nostros. Nos destinavimus servire patri tuo et ambulare . . . . .

L. V<sup>a</sup>.

Quicumque inveniebantur ex nobis interficiebantur hereditates nostræ diripiebantur. Et non ad nos tantum extenderunt manum sed etiam in omnes fines tuos. Et ecce applicuerunt hodie ad arcem in Jerusalem occupare eam. Et munitionem in Bethsuram munierunt. Et nisi preveneritis eos velocius majora quam hæc facient et non poteritis obtinere eos. Et iratus est autem rex ut audivit et convocavit omnes amicos suos et principes exercitus sui et eos qui super equites erant [sed et]<sup>11</sup> de regnis aliis et de insolis et maritimis et venerunt ad eum exercitus conducti et erat numerus exercitus ejus centum millia peditum et xx milia equitum et elipanti xxxii scientes prelium. Et venerunt per Idumeam et applicuerunt ad bethsuram et pugnauerunt dies multos et fecerunt machinas et exierunt et succenderunt eas igni et pugnauerunt fortiter.

LECTIO VI<sup>a</sup>.

regis. Et surrexit rex ante lucem et suscitavit exercitum in impetu suo contra viam Bethsacharam et comparaverunt se virtutes in prelium et tubis cecinerunt et elephantis ostenderunt sanguinem uvæ et mori ad acuendos eos in prelium. Et diviserunt bestias per legiones et astiterunt singulis eliphantis mille viri lorcati concatenatis, et galeæ aeræ in capitibus eorum et quingenti equites ornati singulis bestis electi. hii ante tempus ubicunque erat bestia erant et quocunque ibant non discedebant ab ea et turres lignæ super eos firmæ protegentes super singulas bestias precincti super eas machinæ et super singulas viri virtutis xxxii. qui pugnabant desuper intus<sup>12</sup> ejus. Et appropinquavit judas et exercitus ejus in prelium. Et ceciderunt de exercitu regis sexcenti viri.

FR. II<sup>a</sup>. 1<sup>o</sup>. i<sup>a</sup>.

Et vidit Eleazar filius abaron unam de bestis lorcatam loricis regis et erat supereminens ceteris bestias,<sup>13</sup> et visum

[Second leaf.]

iniquitatis et divide linguas eorum quoniam vidi iniquitatem et contradictionem adversus sanctam civitatem tuam Jerusalem. muro tuo inexpugnabili circumcinge nos, Domine Deus noster. V. Qui regis Israel intende, qui deducis velut ovem

<sup>11</sup> Added by another hand.

<sup>12</sup> Sic.

<sup>13</sup> Sic.

Joseph. muro. R. Angustia<sup>14</sup> mihi sunt undique et quid eligam ignoro melius est mihi incidere in manus hominum quam derelinquere legem Dei mei. V. Si enim hoc egero mors mihi est, si autem non egero non effugiam manus vestras. melius. R. Nunquid scis quare venerim ad te nunc revertar ut preliar<sup>14</sup> adversus principem Persarum contradicentem tuis precibus et meae legationi. verum tamen Michael archangelus princeps vester hoc stat pro filiis populi tui. V. Nunc ergo egressus sum ut docerem te. tunc animadvertite sermonem, et intellige visionem. verum tamen. R. A facie furoris tui Deus conturbata est omnis terræ,<sup>14</sup> sed tu Domine misericordiæ, et ne facias consummationem. V. Converte nos deus salutaris noster et averte iram tuam a nobis. et ne. R. Fluctus tui super me transierunt ego dixi expulsus sum ab oculis tuis putas<sup>15</sup> videbo templum sanctum tuum. V. Abusus vallavit me et pelagus cooperuit caput meum. et ego. R. Indicabo tibi homo quid sit bonum aut quid Dominus requirat a te facere iudicium et iusticiam et sollicitum ambulare cum deo vestro. V. Oratio.

trici populo pleno peccatis misericordiæ domine deus. V. Esto placabilis super nequitiam populi tui. miserere. R. Civitatem istam tu circumda, Domine. Angeli tui custodiant muros ejus exaudi populum tuum cum misericordia. V. Muro tuo inexpugnabili circumcinge nos Domine. exaudi. R. Qui celorum contines thronos et abisos intueris Domine rex regum terram palmo concludis. exaudi nos in gemitibus nostris. V. Non enim in justificationibus nostris et<sup>16</sup> prosternimus preces ante faciem tuam sed in miserationibus tuis multis. exaudi.

## FR. II. L. I.

Et vidi quasi speciem electri velut aspectum ignis intrinsecus ejus per circuitum a lumbis ejus et desuper. Et a lumbis ejus usque dorsum vidi quasi speciem ignis splendentis in circuitu velut aspectum arcus cum fuerit in nube in die pluviae. Hic erat aspectus splendoris per girum, et hec visio similitudinis gloria Domini. Et vidi et cecidi in faciem meam et audiavi vocem loquentis. Et dixit ad me. . . .

Et ingressus est in me spiritus postquam locutus est mihi. Et statuit me supra pedes meos et audiavi loquentem ad me et dicentem Filii<sup>17</sup> hominis. mitto ego te ad filios Israel ad gentes appostatrices quæ recesserunt a me. patres eorum prevaricati sunt pactum meum usque ad diem hanc. Et filii dura facie et indomabili corde sunt ad quos ego mitto te. et dices ad eos. Haec dicit dominus Deus. Si forte vel ipsi audiant et si forte quiescant quoniam domus exasperans est, et sciant quia propheta fuerit in medio eorum.

L. III<sup>a</sup>.

Tu ergo filii hominis ne timeas eos. neque sermones eorum metuas. quoniam increduli et subversores sunt tecum et cum scorpionibus habitas. Verba eorum ne timeas. et vultus eorum ne formides, quia domus exasperans est. loqueris ergo verba mea ad eos. si forte audiant et quiescant quoniam irritatores sunt. Tu autem filii hominis audi quaecunque loquar ad te, et noli esse exasperans sicut domus exasperatrix est. aperi

<sup>1</sup> Sic.<sup>15</sup> Sic.<sup>16</sup> Sic.<sup>17</sup> Sic passim.

L. I<sup>a</sup>.

ad me In qua erat involutus liber et expandit illum coram me. qui erat scriptus intus et foris et scripta erant in eo lamentationes et carmen et ve. Et dixit ad me Filii hominis quodcumque inveneris comede. Comede volumen istud et vadens loquere ad filios Israel. et aperui os meum et cibavit me volumine illo et dixit ad me Filii hominis venter tuus comedet et viscera tua replebuntur volumine isto quod ego do tibi. Et comedi illud et factum est in ore meo sicut mel dulce.

## L. II.

Et dixit ad me. Filii hominis vade ad domum Israel et loqueris verba mea ad eos. Non enim ad populum profundi sermonis et ignotæ linguae tu miteris<sup>18</sup> ad domum Israel, neque ad populos multos profundi sermonis et ignotæ linguae quorum non possis audire sermones et si ad illos metteris<sup>19</sup> ipsi audirent te. Domus autem Israel nolunt audire te quia nolunt audire me.

## LECTIO III.

Omnis quippe domus Israel attrita fronte est et duro corde. Ecce dedi faciem tuam valentiorum faciebus eorum. et frontem tuam duriorem

[At the close of Mr. Wright's preface to his collection of Latin stories, of which I have spoken above, he says:—"I ought, perhaps, to observe that I have reprinted in this collection several Latin stories from the *Altdeutsche Blätter*, which were communicated to that work by Mr. Thoms, from a ms. of the thirteenth century then in his possession, but now transferred to the British Museum." I have never seen the work here referred to; but I have discovered, since the present Paper was printed, that several of the stories which Mr. Wright has taken from it are almost literally the same with tales in the *Speculum Laicorum*. Thus the story "De uxore gulosa" at p. 35 of Mr. Wright's book, that entitled "De ebrio qui vendidit animam suam," at p. 76, and that given in Mr. Wright's Note on story xxv., p. 220, are in the *Speculum*. Two others which I have printed at length from the *Speculum* are among Mr. Wright's extracts from the *Altdeutsche Blätter*, namely tales vii. and ix. in Appendix A to the present Paper. The latter I have given for its intrinsic interest, and also because curiously, whilst it appears in the Derry copy of the *Speculum*, it is not in the Dublin copy. The former I have reproduced on account of the mention of Dyvelin, a name which Mr. Wright had conjecturally substituted for *Wyvelin*, which he found in the *Altdeutsche Blätter*; both the Derry and Dublin mss. confirm his correction. It is possible that the other five stories which Mr. Wright has taken from the *Altdeutsche Blätter* may also be in the *Speculum*; this I have not yet ascertained.

Is the ms. from which these tales were transcribed by Mr. Thoms a third copy of the *Speculum Laicorum*, or does it only contain some stories from the *Speculum*? This is matter for further inquiry.—J.K.I.]

<sup>18</sup> Sic.<sup>19</sup> Sic.

XXVIII.—ON THE EARLIEST ENGLISH TRANSLATION OF THE “*DE IMITATIONE CHRISTI*.” By JOHN K. INGRAM, LL.D., F.T.C.D.

[Read 22nd May, 1882.]

THE treatise *De Imitatione Christi* has, beyond any other book that can be named, taken possession of the heart of Christendom. It has ranked, says De Quincey, “next to the Bible in European publicity and currency.” “No book,” says Milman, “has been so often reprinted; no book has been so often translated, or into so many languages.” “The number of editions and different translations which have come to my knowledge,” said Backer in 1864, “is about 2900, and certainly this number is much below the reality.” And not merely has the book met with this extraordinary popular acceptance, but many men of high eminence have warmly expressed their appreciation of it—men, too, representing various schools of thought, some of them not accepting the dogmatic opinions of the author—Leibnitz, Dr. Johnson, Fontenelle, Wesley, Comte.

For those who know and love this golden book, everything which throws light on the history of its diffusion through Europe will have a certain value. Attention, too, has been of late specially recalled to the whole subject by the remarkable researches of Hirsche, by the fac-simile of the autograph of 1441 edited by Ruelens, and by the writings of Mr. Kettlewell on the authorship of the *Imitation* and on the biography of Thomas à Kempis. I think I may, therefore, bespeak some degree of interest for the contribution I have now to make to our knowledge of the English versions of the work.

The earliest printed English translation of the *De Imitatione* is that by Atkynson. Its title is as follows:—

A full devoute and gostely treatyse of ye Imitacyon and Followinge ye blessed Lyfe of our most mercifull Saviour Cryst. Compyled in Latyn by the right worshypfull doctor master John Gerson: and translate into English the yere of our lorde m.d.x. by Mayster Wyllyam Atkynson, Doctor of Divynyte; at ye speciall request and commandement of ye full excellent pryncesse Margarete, Moder to our Soverayne Lorde Kynge Henry the VII., and countesse of Rychemount and Derby. m.cccc.x.

Atkynson translated only the first three books of the *De Imitatione*. The fourth was translated by Margaret herself from the French, in 1504, and her version of that book was printed, along with Atkynson's of the three preceding ones, by Wynkyn de Worde. The volume is a very rare one; there are two copies of it in the British Museum.

But this, though the *earliest printed*, is not the *earliest* English version of the work. An unpublished one exists among the MSS. in the Library of Trinity College, Dublin, which I regard as of very great interest; and it is of this that I am about to give an account.



When I first looked into the MS., I thought it probable that it was a copy of Atkynson's translation, which I had never seen; but Dibdin, in the notes to his version of the *Imitatio*, gives some extracts from Atkynson, and, on comparing them with the MS., I found the renderings quite different. My attention was then caught by some of the old words and forms used in the MS., and so I was led to enter on a thorough examination of it. At least one other copy of this early translation is, as we shall see, in existence; but no account of it has, so far as I know, ever been given, and I cannot but express my surprise that it has been so entirely overlooked. One reason for this, so far as the Trinity College copy is concerned, may have been that it has been, through ignorance or carelessness, erroneously lettered *Musica Celi* on the cover. This is seen at once by anyone accustomed to ancient writing, who examines the first page of the MS., to be a mistake for *Musica Ecclesiastica*, one of the names by which the *Imitatio* was designated, but which, from its comparative rarity, may have misled persons who looked into the volume as to its identity, and suggested the idea that it was a version of one or more of the other treatises of Thomas à Kempis.

Neither Dr. Lyon nor Mr. Monck Mason seems to have been aware, in compiling their respective Catalogues of the Dublin MSS., that this book was the same with the *Imitation*.<sup>1</sup> Mason, after giving the title, "*Musica Ecclesiastica*, written by Thomas à Kempis," and the names of the three parts, adds this note:—"The following authority for this being the work of the above-named writer occurs in the margin—'I do hear that this booke was made by one Thomas a Kempist; and lett a man looke in any chapter of the said booke, and he shall find something suitable to his condicion'; the date of the handwriting of this and of other notes, which are scribbled in the margin of the book, is probably about the year 1600." Mason could scarcely be of opinion that such a note was any authority towards deciding the vexed question as to the authorship of the *Imitation*; though in the case of a different work it would be evidence that it was attributed to the same author to whom the *Imitation* has been generally ascribed. This title of *Musica Ecclesiastica* is given to the *Imitatio* in several MSS. of the original, which are found in English libraries, and Mr. Kettlewell has said (page 493 of his book on the authorship of the *Imitatio*) that the title appears to be peculiar to the English copies. But this does not seem to be proved. Indeed, on page 91, Mr. Kettlewell cites the statement that "Gabriel Naudæus and several other learned men famed for their knowledge of ancient MSS. did declare that" the work "was, in *all* the most ancient copies, entitled *De Musica Ecclesiastica*." Mr. Ruelens, the editor of the fac-simile of the

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<sup>1</sup> Mr. J. T. Gilbert, in his list of the MSS. of Trinity College, describes the volume simply as "Works ascribed to Thomas à Kempis."—(*Eighth Report of the Royal Commission on Historical Monuments*, p. 583.)

MS. of 1441, seems to think it matter of wonder that that title should occur in one copy which has come under his notice. He says: "The Brussels Library possesses a Manuscript of the *Imitation*, dating from the fifteenth century (No. 15,138), of which the title is as follows—'Hic est libellus qui vocatur Musica Ecclesiastica.' These expressions seemed so strange that they have been thought to be an error or a freak of fancy on the part of the scribe." But, as we have seen, a good many MSS. have this title. It is certainly a curious one, and the only explanation of it yet offered is that supplied by Hirsche, who makes it refer to the rhythmic character which marks à Kempis' style, and which he himself indicated by a sort of quasi-musical notation, a peculiarity on which Hirsche founds his argument to show that the *Imitation* was his work, and not that of Gerson or Gersen, or any of the other candidates for its authorship.

As to the external history of the volume which I am about to describe, and which, by permission of the Board of Trinity College, I am enabled to exhibit to the Academy, but little can be said. It is numbered F. 5. 8., and is placed among the MSS. presented to the College by Stearne, Bishop of Clogher. Before it was included in the Stearne collection, it had belonged to John Madden, President of the Irish College of Physicians.<sup>2</sup> On the title-page are written the words: "For Mr. Hen: Dodwell, at Mr. Tooke's, in St. Paul's Churchyard, Bookseller." This is, doubtless, the well-known Henry Dodwell, who was elected a Fellow of Trinity College, Dublin, in 1662, resigned his Fellowship in 1666, and afterwards became Camden Professor of History at Oxford. Several names are written in different parts of the book, the most frequently recurring being that of *Turney*. Thus we have in several places "Emor Turney"; "William Turney, his book, 1655"; "Will. Turney, his book, God give him grace"; "William Turney, of Seabrooke, in the county of Bucks, . . . 1655"; "Barnard Turney, . . . in the parish of . . . in the county of Bedford." The volume must, shortly before Dodwell acquired it, have been in the possession of this Turney family.

The translation gives only the first three Parts of the *Imitation*. It is perfect, with the exception of two places—one leaf (the volume is of vellum) has been cut out, which contained portions of chapters 19 and 20 of the third Part, and half of another leaf, which contained portions of chapters 22 and 23 of the same Part.

On the first page is the rubric—"Here begyneth þe tretise called Musica Eccli<sup>a</sup>." This is followed by the contents of Part I.<sup>3</sup> At the end of the first Part is written: "Here endiþ þe first partie of Musica Ecclesiastica. And now folowen þe Chapitres of the ii<sup>e</sup>. partie."

<sup>2</sup> See *Catalogi Librorum Manuscriptorum Angliæ et Hiberniæ* (known as "Barnard's Catalogue"), vol. ii., part 2, p. 59, No. 1662.

<sup>3</sup> Chapter 25 of Bk. I., though in the MS., is not mentioned in the Table of Contents.

At the beginning of Part ii.: "Here begynneth of þe Amonicions drawyng gretly inwarde"; and at the end of it: "Here endiþ þe Amonicions drawyng inwarde. And here folowen the Chapitres of þe yirde boke þat is of inwarde consolacyon." And at the end of Part iii.: "Here endiþ þe boke of Inwarde Consolacyoun. Deo gracias."

Mr. Kettlewell gives, at page 94 of his work, an extract from the printed Catalogue of MSS. in the University Library, Cambridge, which, by the quotations it supplies of the opening and closing sentences, enables us to see that a MS. in that library contains the same translation of the *Imitation* as that in the Dublin volume.<sup>4</sup> But the Cambridge copy is much more seriously mutilated—wanting, as it does, eighteen leaves. It is surprising that Mr. Kettlewell, finding this entry in the Cambridge Catalogue, was not moved to make an examination of such an interesting item in the bibliography of the *Imitation*. He appears, however, to have taken no further notice of it. On looking into the Cambridge Catalogue, we find a note, omitted by Mr. Kettlewell, attributing to the MS. the date of "about 1400." If this were really its date, the controversy as to the authorship of the *Imitation* would be at an end, so far at least as the claim of Thomas à Kempis is concerned, for he was not born before 1379 or 1380. If the year 1400 is wrongly given by inadvertence, 1500

<sup>4</sup> The following is the whole of the entry in the Cambridge Catalogue:—

"1411. Gg. 1. 16.

"A quarto, on vellum, containing ff. 171, with 20 lines in each page. There are catchwords after every 8th leaf, and a later hand has paged the MS. throughout. Date, about 1400.

"AN ENGLISH TRANSLATION of the first three books of the treatise *De Imitatione Christi*.

"A leaf is lost between ff. 62 and 63; 68 and 69; and 16 between ff. 128 and 129, containing B. iii. ch. 26–35.

"The initial rubrick in f. 1 is—

"Here bigynneth the tretes called *Musica Ecclesiastica*. . . .

"B. i. begins (f. 1 a)—

" . . . Oure lord saith he that foloweth me goith not in darkenesse. . . .

"B. 3. ends (f. 171 b)—

"Defende and kepe the soul of þi litel servante amonge so many periles of þis corruptible lyue and thi grace going with dresse him by the wey of pees to the cuntry of everlastynge clerenes. Amen. Amen. Amen.

"Here ende the boke of inwarde consolacion.

"The translation differs considerably from that printed by Wynkyn de Worde."

In the Dublin copy the word *dresse* in the final sentence appears to have been altered by a later hand to *directe*. A writer quoted by Mr. Kettlewell, at p. 93 of his "Authorship of the *De Imitatione*," says:—"At this very time I have in my hands an exact transcript of a very old English manuscript, which is mentioned in the Appendix to the Catalogue of the Bodleian MSS., containing the first three books of that divine treatise (but wanting that which we call the fourth), without any name—or so much as ever mentioning it to be a translation—under this very title *Musica Ecclesiastica*." Is this a third copy of our old version?

being intended, the latter is, in my opinion, much too late a date. I think the true date is nearer to 1450 than to 1500.

Throughout the volume, for *th* the old letter *thorn* (þ) is used, except at the beginning of the first word of a sentence, when *Th* is written. The following are some of the forms of the language. *Tho* is still the plural of *that*; while the nominative *thai* is used, the accusative is *hem*; and the corresponding possessive not *their*, but *her*. The old southern-dialect termination of the plural persons of the present tense of the verb, *þ*, or *yþ*, is almost everywhere found, *en* occurring only in a comparatively few places. Thus *we nedþ*, *we owiþ* not, *þese temporall goodes biþ* as noon, *þings þat displesiþ* þe, *þese goþ* not, *all þings þat þey doþ*. But also, here and there, we find the form in *en*, as *men dien sodenly*. Beside *we biþ*, occur *we be*, *we ben*, and *we are*. The verb *mowe* is of frequent occurrence—*how shalt þou mowe sufre? þat þou mowe stand sure*. *Mote* is in use—*blessed mote þou be* (*sis benedictus*). *Shal* regularly turns to *shul* in the plural—he *shal*, but *we shul*, *they shul*. There are some strong past participles where we use weak ones, as *yolden* where we say *yielded*; and in other instances different strong forms from the modern ones, as *yoven* (from *give*) for *given*. On the other hand, the infinitive has not the termination *en*, nor have the plural persons of the preterite that ending.

I have observed clear traces of a later hand erasing in several places the old termination of the plural person of the verb *yþ*, and substituting *n*, as if to modernize the style. Thus in the following clauses of chapter 25 of Part I.:—“*lyven abstractly, are cloþed boistously, laboryn gretly, spekyn litel, wakȳ longe, risȳ early, praisen longe, ofte tymes redyn and kepyn hem in al maner discipline*,”—every one of the active verbs, with the exception of *lyven*, has been altered, the original form of the termination in the MS. having been, I believe, without doubt, *yþ*. But if all the plurals in *þ* were to be changed, every page would contain corrections, for that form abounds all through the volume.

If we compare the English of the translation generally with that of Pecock's *Repressor*, which is attributed to the year 1449, we shall find it, I think, quite as archaic, and certainly more so than that of Caxton's *Recuyell of the Histories of Troye*, which belongs to the year 1471. Unless there was from local circumstances a slower development of the language in the part of England where the translator lived than elsewhere, his work cannot be of later date than 1460.

However the question of the date of the translation may be decided, it is strange that so striking a specimen of the English of the fifteenth century should have been altogether neglected.

I may here mention a few of the old words or quaint renderings which I have met in going through the book—*ab intra*, “*wipin-forþe*”; *ab extra*, “*wipoutforþe*”; *ad unionem*, “*to conhed*”; *adunare*, “*to oone*”; *latebræ*, “*hidels*”; *laqueos*, “*grynnes*”; *pennas sicut columbæ*, “*fedres as a colver*”; *perversus*, “*an over-*

þwart man"; pravorum securitas, "þe surety of shrewes"; monachi et moniales, "monkes and mynchines"; vires fortiores prioribus, "strengþes more mighty than the raper"; solitas ineptias cordis, "the wont japes of þyne heart"; omnem exercitum cæli, "all þe knighthode of heven"; mens solidata est, "my mind is sadded"; mundi hujus susurrations, "þe rouning of þis world"; interdum percipis, "þou perceivest amonge"; vestis subtilis, "þe sotel cloþe"; tepescimus, "we wax leuke"; gravitatem conscientie, "grucching of conscience"; quod justum est judicabit, "þat rightwys is, he shall deme"; litteras tradunt, sed tu sensum aperis, "þei bitake us þe letter, but þou openest þe witte."

But not merely is this translation interesting as a specimen of fifteenth-century English; it has also great intrinsic merit. The expression is often very pointed and forcible, and the character of the style is in general well adapted for the reproduction in English of the thought of a Kempis. Hallam justly speaks of the "heart-piercing" quality of many of the detached sentences of this writer, and despairs of translation being able to give the effect of his "concise and energetic" expression. Milman similarly remarks on his "short and quivering sentences, which go at once to the heart, and lay hold of and cling tenaciously to the memory with the compression and completeness of proverbs." I do not say that this earliest English version is comparable with the original Latin in these respects. But it really possesses a high degree of excellence, which is well brought out by comparing it with the first printed translation—that of Atkynson. By the kindness of Mr. Eccles, of the British Museum, I have obtained a copy of Atkynson's rendering of the third chapter of Part I. I will first read the Latin of a few sentences of this chapter, then the MS. translation of them, and lastly Atkynson's version of the same sentences; and it will be seen what rhetorical elaboration and expansion there is in the latter, and how entirely he spoils the simple earnestness and solemnity of the original, whilst these qualities are well preserved in the MS. version.

"Dic mihi, ubi sunt modo omnes illi domini et magistri, quos bene novisti, dum adhuc viverent et studiis florerent? Jam eorum præbendas alii possident, et nescio utrum de eis recogitant. In vita sua aliquid esse videbantur, et modo de illis tacetur. O quam cito transit gloria mundi! Utinam vita eorum scientiæ ipsorum concordasset! Tunc bene studuissent et legisset. Quam multi pereunt per vanam scientiam in sæculo, qui parum curant de Dei servitio! Et quia magis eligunt magni esse quam humiles, ideo evanescent in cogitationibus suis."

This well-known passage the old translator renders as follows:—

"Telle me now where are the lordes and maistres that thou knewist somtyme, whiles thei lyved and florishid in scoles. Now othir men have her prebendes, and I wote not whethir thei ones thenke upon hem. In her lyves somewhat thei apperid; and now of hem spekith almost no man. O lorde, how sone passith the glory of

this world. Wolde God that her lif had be accordyng to her kunnyng, for then had thei wel studied and wel radde. How many ben ther that perissith in this worlde by veyn konnyng, that litel retchith of the service of God. And for thei chese rather to be grete than meke, therefore thei vanisshe away in her owne thoughtes.”<sup>5</sup>

Contrast with this strictly literal and really effective translation the following, which is Atkynson’s rendering, if rendering it deserves to be called, being in fact a paraphrase.

“Where be now all the royal poetes in theyr craftye conveyed poemes, and elegant oratours with theyr oracions garnished with eligancy: the philosophers with their pregnant reasons and sentences. Divers of these maner of clerkes we have knowen in oure days. Now their curiosite is passed and other men occupie theyr prebendes and promociouns that they poss[ess]ed: If they were here now agayne, I suppose they wolde never labour so busily for curyosyte in knowlege ne temporall promocyons. Nowe they had lever than all this worlde that theyr entent had been accordyng to the holy doctryne of Scrypture; than the study had been happy. O howe many in maner of every state perishith in this worlde by vayne glory that more desyre to please prynces and prelates and other patrons for a temporall promocyon than truly and inwardly to serve God for the promociouns eternall. These desyre rather by pompe and pryde to be grete in the world than by mekeness and charyte to be in favoure with God and therefore they vanyasse in theyr thoughtes and desyres as the smoke that ever the more it ascendeth the more it fadeth and faileth.”

A great part of this, it will be seen, is not in the original at all. The royal poets, the elegant orators, the philosophers with their pregnant reasons, the princes, prelates and other patrons, the image of the smoke at the end, and much else in the passage, are purely Atkynson, and not à Kempis at all; whilst the MS. translator makes it his business here and everywhere else in all simplicity to follow his author, and never thinks of exhibiting his eloquence at all. He writes in fact like a man penetrated with the moral and religious spirit of the treatise on which he was engaged.

I had intended to exhibit the features of the old translation in greater detail by means of selected specimens: but it will not be necessary to occupy the pages of the *Proceedings* with extracts, since it is my purpose, if I am confirmed by the best judges in my impression of the interest and value of the version, to print it hereafter in full, with such philological illustration and comment as it may seem to require, and as I may be able to supply.

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<sup>5</sup> I have written *th* throughout this passage for *y*.

**XXIX.—SEPULCHRAL AND OTHER PREHISTORIC RELICS, COUNTIES WEXFORD AND WICKLOW.** By G. H. KINAHAN, M.R.I.A., &c.  
With Plates VIII. and IX.

[Read, 24th April, 1882.]

WHILE engaged in the geological examination of the country adjacent to the mearing of the counties of Wicklow and Wexford, I found that in the vicinity of the range in which Croghan-Kinshella is the highest peak, sepulchral and more or less allied relics have been observed from time to time; and as these, or at least most of them, do not appear to have been recorded, I take the liberty of laying my notes, on those with which I am acquainted, before the Members of the Academy. Many of them are in the Manor of Wingfield, the property of the Right Hon. Viscount Powerscourt, and to these my attention was directed by Myles Byrne, of Wicklow Gap, son of his Lordship's gamekeeper; while Lord Powerscourt courteously gave me permission to make any explorations I pleased on his property. In the following notes we shall begin with the most eastward of the antiquities now referred to.

**KILLAHUELA MOAT.**—This lies south-eastward of Croghan-Kinshella, in the County Wicklow. Some years ago a smith of the name of Sullivan dug in it for treasure, and is said to have exhumed an urn. At the time of the last British Association Meeting in Dublin Professor M'Kenny Hughes, of Cambridge, cut a trench across it, and found, nearly half way up from the base, a horizontal layer of ashes.

**MULLAUN URN.**—Mullaun is situated near the church and well of Kilnenor, in the County Wexford, to the south of Croghan-Kinshella. Here some years ago three men, while removing a ditch, came on a kistvaen, and left it, intending to open it at midnight, but when they returned at midnight the howling of the wind in the trees frightened them away; afterwards when it was opened an urn with ashes were found. The common belief in all this country is, that if the urn is opened at the proper moment, which is generally considered to be midnight, it will contain gold; but if at any other time the gold will melt into ashes. When this is supposed to have happened, the urn is nearly always smashed. Some recommend that before you see the urn you should partially raise the top stone, and with your hand slip into the urn half a sovereign, as "gold makes gold grow." If you find a treasure you must kill a cat, as otherwise it will bring you ill luck.

As in this case, so also in many others in the area, the kistvaens have of late years been found nearly always while levelling old ditches. In explanation of this I would suggest the following: when the land was first fenced into fields, any kistvaens that might be on the line of a fence would not be disturbed, and would remain until the ditch was taken away; while all others would be discovered and destroyed during the subsequent tillage of the land. This idea is cor-

roborated by finding in the ditches or houses in the vicinity of places where kistvaens are discovered flags similar to those used in the construction of the kistvaens.

**PALLIS MOAT** is situated near the south-west of the parish of Kilnenor. It is large enough to have been a royal residence; but as it is close to the mearing of Tomathone, which may have been named from it, it may be a tuaim. It has been dug into several times for treasure; but, as far as I can learn, nothing has been found in it.

**WHITE HEAPS.**—In the townland of Glenoge, a little north of the parish of Kilnenor, and immediately adjoining the mearing of the county Wicklow, there were formerly several heaps of quartz blocks. From the description given of them they seem to have been laghtas, or small carns; but some years ago they were carted away to be crushed by one of the gold companies. The country people report that the company got no gold out of them, while the "good people" ruined the company for taking the heaps away. The space on which the heaps were situated is untilled, and is left for the fairies.

**CLONROE RAHEEN.**—South-west of Croaghan-Kinshella, in the townland of Clonroe Upper, immediately north-east of Clonroe Bridge, there was a semicircular enclosure, 130 feet in diameter, the northern half of which was destroyed when the county road was made. About forty years ago the occupier of the land wanted to square his field, and supposing the semicircle to be part of one of "Brownrigg's old manor folds," as they are called from a tenant that once held nearly all the manor of Wingfield, he employed a man named John Rogan to level it, and in the east side he found a kistvaen, with an urn in it. This Rogan buried, and he does not now like to show the exact spot. Some kistvaens were said to have been found inside the same circle, but Rogan does not believe this. Many "Danes' pipes" were found in the enclosure.

**BALLYTHOMAS.**—About the same time, or a little after, the same John Rogan was quarrying stones for drains at the south-west end of the townland of Ballythomas, and about 400 yards north-east of Clonroe cross-roads there were two small circular heaps, one of small stones, and the other of clay and stones: in the latter he found a kistvaen and urn; the latter he buried, but on account of the place having since been planted, he cannot show the exact spot where he buried it. In the tillage at Clonroe cross-roads "Danes' pipes" have been found.

**ANNAGH CENTRE.**—About two miles south of Clonroe cross-roads, Byrne, Lord Powerscourt's gamekeeper, was levelling an old fort grown over with hops, this neighbourhood formerly being famous for beer, and in the fosse to the south-east he found a wooden box, about seven inches square and four inches high, full of some fine mould partly like ashes. The box "fell into brass" when he took it out. He also found a great many "Danes' pipes" in this raheen.

**BARRACURRAGH** lies about two miles south-east of Clonroe cross-roads, and an urn is said to have been found in it by a man of the name of Dunn.



**ANNAGH MIDDLE.**—About two miles S.S.W. of Clonroe cross-roads a man of the name of Harris found an urn in a kistvaen here, about thirty years ago. When he took out the urn, and let it dry, it fell into small pieces. There was a raheen from 80 to 100 yards to the eastward of it.

**GIANT'S GRAVE.**—In the Townland of Annagh Long, immediately south of Clonroe, Wicklow Gap, between the old and the new lines of road, there was a heap of "field stones." This was removed to fence the ground, and under it was found a double chamber like those commonly called "Giants' graves." This was explored, but nothing except turf ashes found in it.

**BALLYRORY.**—To the north of Wicklow Gap, and a little north-west of Ballyrory House, a kistvaen and ashes were found. South of the house, in the bog, there are the remains of a raheen, and east of it lumps of bog butter and a morticed oak frame were dug up in cutting the turf.

**BALLYNAHARNA.**—Close to the north mearing of this townland, due north of the "hurling green," a kistvaen and urn were found in the levelling of an old ditch. The "hurling green" is a perfectly level shelf of considerable area, about half way up the hill to the west of Wicklow Gap. Here, within the recollection of the grandfathers of the present people, a patron and hurling-matches were annually held, the dancing-green being near a spring called "Feu" (*quore* a corruption of *fuaran*, a cold spring). The people of the vicinity have a tradition that it was on this green that the famous hurling-match between the people of Wexford and Carlow was played, at which the former got the *soubriquet* of "yellow bellies," from the colour of the scarves they wore round their waists. A second urn is said to have been found in this townland, to the westward, near the old village; but whereabouts I could not learn.

**KILCASHEL.**—To the north-east of the last, close to the east mearing of Barnadown, is the ancient burying-place of Kilcashel, immediately south of which there was a carn, the stones of which were carted away by Mr. Dowse, of Barnadown, between twenty-five and thirty years ago, to be used in making drains. Of the carn there now only remains a portion of a circle of rude standing stones. The church also is nearly all gone; but a portion of the cashel round it is in part perfect. A kistvaen, with an urn, were found near the west of the townland.

**LOGGAN MOAT.**—Wexford, Sheet 2. This is situated about half a mile S.S.W. of Kilcashel. Adjoining and south of the moat is an irregular triangular level tract (locally called "the table of the moat" *a*, fig. 1, Plate VIII.), which within the last thirty years was surrounded by a fosse, which has been levelled by the occupiers of the land. When levelling this fosse several kistvaens with urns were found (*c*), while a very handsome urn was found in a kistvaen (*d*) in the gravel ridge, about 180 yards south-east of the moat. This urn was stronger than most of them, and was brought home by the occupier of the land, a man of the name of

Kelly, herd of Mr. Brownriggs, of Wingfield, and for years was used as a domestic utensil: he went to America, and what afterwards became of the urn no one can tell. The others are all said to have been broken up, as they contained "nothing but dirty ashes"; but little bits of them can be picked up in the ditches. About 100 yards south-west of the moat (*e*), some kistvaens containing ashes, but no urns, were found; and on the gravel ridge, about 800 or 900 yards west of the moat (*f*), a number of similar kistvaens were discovered while tilling the land. Immediately south-west of the moat a fence made round this side of it to separate it from the adjoining land passed through a kitchen midden locally called a "sloplough" (*g*), and a few days after it was made there was found on the ditch a gold ring, with an inscription that "none of the clergy in the county, or any other learned man, could read." This ring is said to have been sold by the finder in Carnew.

This moat may have been a royal rath, the chiefs being buried in its eastern fosse; while the graves of the other members of the septs may be represented by the kistvaens without urns. The chief graves here and at Clonroë appear to have been at the south-east of the structures.

CUMMER FEARTHA.—To the south-west of Loggan, on the north and south slopes of the mountain ridge, are Cummer and Cummerduff, the village being in the former. Adjoining the village is the "Druids' Well"—this name, however, seems to be quite modern; and immediately north-west of the well is a structure made up of two circles of standing stones (plan and section, figs. 2 and 3, Plate VIII.), one being nine feet and the other fourteen feet in diameter. From an exploration it would appear that the stones of both circles had originally been set up on the surface of the ground, those in the outer circle sloping outwards, and having been under-pinned, to keep them from falling; while those in the inner circle were wedged, or propped up straight. The inner stones were higher than the outer, a narrow terrace being formed between the two. The stuff in the surrounding mound had been brought to the place.

Between the circles to the north-east and south-west the spaces were filled with wood ashes and roasted sandstone shingle. Ranging across the structure in a north and south line, a little west of the centre, were found three pits, *a*, *b*, and *c*. *a* was under the inner circle; it was one and a-half feet in diameter, and two and a-half feet deep. *b* was immediately west of the centre, being one and a-half feet in diameter and depth; while *c* was just inside the inner circle, and was one and a-half feet in diameter, and three and a-half feet deep. Besides these, immediately north-west of *c*, was the pit *d*, three feet in diameter, but only one foot deep. These pits were filled in with clay mixed with ashes and a few pieces of burnt stone. At the bottom of *a* there was a large, uneven, but roundish "firestone" (sandstone) (*d*).

Over these pits, at a depth of three feet below the surface, inside

the inner circle, was a thin floor of ashes, and margining it, or lining the inside circle, were "firestones," in places very evenly placed, like a pavement. Evidently fires had been lit from time to time inside the inner circle, while the ashes were thrown out to the two sides (A and B, fig. 3). No implements or the like were found, except at the top of the ashes a piece of a glass bottle and a stone disc, which had apparently been used as a quoit. Both these had a modern look, and may have been of the time of the patrons, which were held here up to about the year 1798.

Thirty-three yards south of the circles are irregular low heaps of ashes mixed with roasted sandstone shingle.

Twenty yards north-west of the circles, in or about the year 1877, James Bains, of Cummer, when building a fence, had occasion to raise a flag at the surface of the ground, which he found to cover a kistvaen, that appeared to be full of ashy clay; but on driving down his spade into it he broke an urn that was in the centre of it. This urn appears, from the fragments, to have been about twelve inches in diameter at the inside of its mouth, and about nine inches high. It was of a different shape and differently ornamented from any of the urns in the Academy collection, its greatest peculiarity being the flat lip, about two inches wide, around the mouth.

James Bains states that between thirty and forty years ago, while removing a fence to the westward of the circles, he also found, in a row, three kistvaens, with urns in them. In the two outer kistvaens there were urns somewhat like that just described; but in the middle one, inside a similar large urn, was a small one. The latter he had in his possession till a few years ago, when it was stolen from him.

Running nearly due north from Cummer village, for 270 yards, is a wide rocky passage, locally called the "Causey." At the north end of this, in the angle formed by the junction of two county roads, are some standing stones. These were formerly much more numerous, forming circles and other figures, paths, &c., but most of them have been carried away recently, especially during the building of the Monaseed church in the neighbourhood. These stones were locally called "The Loads," the people having a story that when the castle of Ferns was being built carts of stones going to it broke down here. This, however, seems to be a modern invention, as the stones were evidently placed systematically and by design. A little further north, in Cummerduff, south of a spring, are stones that appear to be the ruins of a small cromleac.

Different explorations were made about the village of Cummer, but without finding a new kistvaen, and it seems probable that all, except those in the fences, were removed long since, while tilling the land or building the houses, more especially as many of the stones in the walls of the houses are like the flags used in the kistvaen last discovered. Evidently Cummer was in old times a place of note, a *fearth* being situated near the south spring; while on the ridge,

from which there are extensive views, there were different megalithic structures, probably for the celebration of some sort of Pagan gathering or festival. At a later period the Pagan festival was succeeded by a Christian one, a patron having been held here for years, even up to the memory of the fathers of those now living. It appears remarkable that no implements nor ornaments, except the disc and glass above mentioned, were found during the exploration, although the whole of the ash heaps at the circles were carefully turned over; nor, as far as we could learn, have they at any time been found. Who erected the circles at the south well: were they Pagans or Christians? And what were the fires for? No bone charcoal was observed, although carefully looked for.

**CUMMERDUFF, or the QUAKER'S HOLLOW.**—Wexford, Sheet 2. On the north-east slope of this coom, or the most sunny side of it, are the remains of various structures, now very much tossed about, thus making their original use hard to be determined. One of the most perfect of these is in part like the circles at Cummer village. It is a circular structure 16 feet in diameter, having in the centre a circular pit 6 feet in diameter, and running west from the pit a passage 15 inches wide, and 20·5 feet long (fig. 4, Plate VIII.) This is called the "Quaker's Hut"; but it was evidently never used as a human habitation. In appearance it is somewhat like the kilns used for drying flax in Ulster at the present day. The pit and the passage are margined with stones, and a fire seems to have been lit in the former; but nothing positive could be ascertained from the excavations made. Immediately south-west of this structure is a north and south enclosure, 16 yards wide, and on its east side 29 yards long, and on the west side 23 yards, the south end being an irregular curve; at the middle of this, but a little to the east, is the remains of an east and west habitation, 8 yards by 5 yards. About 100 yards south-west of the "Quaker's Hut" is a second north and south enclosure, having to the west a straight boundary 26 yards long, its full width being 11 yards, the east wall being slightly curved, making the whole space enclosed of a regular D shape. Running due east from the west end of this enclosure was a "causey," or paved path, 35 yards long, and about 2 yards wide. Near these there seem to have been also other structures, but the remains are now so much disturbed, that it would be rash to try and restore their original forms and plans. As these structures are so near those previously described, they ought to be mentioned; but I would be inclined to suspect that all are more or less modern, and of quite a recent date compared with those at Cummer village.

**CONNAGH HILL CIRCLES.**—Eastward of Cummer, near the base of the south slope of Connagh Hill, are three small circles, like those previously mentioned in Ballythomas, forming an equilateral triangle. They are all about twelve feet in diameter, and look like the sites of cloghans. A little south of these there is a large flat block of hornblende rock, having on its surface eight cups (fig. 7, Plate IX.) Five of

these form a north and south cross; while an oval cup lies a little to the north-east of it, and two cups to the south-east of the stones. I think it remarkable finding cups in such a hard stone, as in the various places I have visited such hard stones are left uninscribed. A great treasure is said to be concealed hereabouts. Various persons have visited it at night to dig. A member of the last exploring party told me, that after they had commenced their work they found that an awful-looking bull was superintending them, and immediately they all ran away.

It may be of importance to mention that tradition states that this neighbourhood was visited by St. Patrick, who founded an ecclesiastical settlement in the present townland of Coolafancy, a little inside the bounds of the county Wicklow. The ancient church, as also the parish, is called Crosspatrick. A few miles to the north-east of the church, and also just inside the mearing, is Toberpatrick, a well dedicated to this saint. A visit of St. Patrick to the place may possibly imply that the locality was a noted one in Pagan times.

Other structures, but more or less removed from the Croaghan Kinshella range, which may be recorded, are:—

**MOTTBOWER**, eastward of Carnew, a little inside the county of Wexford.—Immediately north of the county road, to the west of the townland, there is a circular structure, a little higher than the level of the field, which might be either the site of a rath or of a moat. Between twenty-five and thirty years ago a chamber was discovered in it, which is said to have had steps leading down to it, and to have had a stone table in the centre: the entrance to the chamber is now closed up, and it could not be explored.

**UMRYGAR MOATS**.—These lie respectively a little south and south-west of Carnew, in the townland of Umrygar, county Wicklow. That to the westward is very perfect, while that to the east is nearly all carried away, the gravel of which it was formed having been used for road metal.

**GARRY HASTEN MOAT**.—Wexford, Sheet 4. The site of this moat is on the banks of the Derry river, close to Abbeystown ford, and nearly a mile north-east of Clonegal. The moat has now been all carried away, the only remaining trace of it being a slight circular rise in the field. An abbey formerly existed immediately to the east of it; but the new road now obliterates the last trace of it. Nothing further about the moat or abbey appears to be known in the neighbourhood.

**STRANAKELLY MOAT**.—About two and a-half miles west of Tinnahely, near the north mearing of the townland of Stranakelly, Wicklow, Sheet 43, there is about one-half of a moat now remaining; it is being gradually carted away to spread on the neighbouring boggy land. The outside portion for about a foot in depth is ashy, having burnt stones in it; but we could not learn if any urns or other sepulchral relics had been found in connexion with it, although in the tillage around it we picked up what appeared to be small fragments of

an urn. This moat is situated a little north-west of an ancient ruin and graveyard called Temple. These moats in the vicinity of churches appear to suggest that such places were noted in Pagan times, as St. Mullen's, county Carlow; while the following is a list of primitive churches observed in the vicinity of moats and such like structure, from which it may be inferred that the early Christian missionaries took possession of Pagan settlements, and utilized them. I would suggest that while they lived in the churches, they addressed the people from the moats, following the example of their predecessors, the Brehons.

- Carlow, Sheet 3, a church a little south-east of Rathmore moat.  
 " " 3, Templeboy, a little west of a rath.  
 " " 4, church (St. Patrick's?), with what appears to be the remains of a moat immediately to the north-west. This church lies half a mile north of Rathvilly moat.  
 " " 5, Kilmacart, a little to the north-east of Hacketstown, has disappeared, and its exact site is unknown; but it is said to have been near Mill moat, which adjoins the mearing of the townland.  
 " " 8, Killerig, about 300 yards west of a moat.  
 " " 10, Clonmore Abbey, 450 yards west of a large moat.  
 " " 13, Kilmurry, a little south-east of a moat.  
 " " 13, a church 500 yards north-east of Gallowshill moat.

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NOTE ADDED IN THE PRESS.

The following additional unrecorded urns have been found in the county Wexford:—An urn nearly two feet high, found in the manor of Wingfield, near the mearing of Cummerduff and Loggan. Two urns, found some years ago in the south-east portion of the fosse of Pallis fort; one is said to have been full of "Danes' pipes," and the other of burnt bones: one of them, till very lately, was used as a domestic utensil. An urn found near the ford east of Monaseed. Two urns found in twin kistvaens under a stone and clay mound, in the townland of Ballykale, to the south of Gorey: one of these urns is now in the Museum of the Academy. All the urns found in the moats and raths were at the south-east side. A similar statement has been made by explorers elsewhere.

## DESCRIPTION OF PLATES VIII. AND IX.,

*Illustrating Mr. Kinahan's Paper on Prehistoric Remains in Wexford and Wicklow.*

Plate VIII., Fig. 1.—Map of Loggan moat and feartha.

*a.* Table of moat.

*b.* Kitchen midden.

*c* and *d.* Kistvaens with urns.

*e* and *f.* Fearthas, kistvaens.

„ Fig. 2.—Plan of Cummer circles.

„ Fig. 3.—North and south section of Cummer circles.

*a.* Pit, 1·5 feet in diameter, and 2·5 feet deep.

*b.* „ 1·5 „ „ 1·5 „

*c.* „ 1·5 „ „ 3·5 „

*d.* „ 3 „ „ 1 foot deep.

„ Fig. 4.—Plan of Quaker's hut, Cummerduff.

Plate IX., Fig. 1.—Table-stone, Connagh Hill, Wexford, Shee 2.

## XXX.—MEGALITHIC STRUCTURES, COUNTIES WICKLOW AND CARLOW.

By G. H. KINAHAN, M.R.I.A., &c. With Plates IX., X., and XI.

[Read, 26th June, 1882.]

THE structures to which I would draw attention appear to be allied to the *cnocáns* of the Aran Islands, Galway Bay. Those are clay mounds, in some of which have been found one or more chambers, built more or less similarly to a *cloghán*; while these now to be described have the internal chambers constructed of massive flags. They are more or less dismantled, the clay covering for the most part, and some of the stones having been removed.

In the townland of Moylisha, Wicklow, Sheet 42, is the structure called Labbanasigha. A little north of it, down the slope of the hill, are the remains of a *caher*, or stone fort, while about a mile to the north is the ancient church of Aghowle and the cross of St. Finden.

Labbanasigha, of which figure 2, Plate IX., is the ground-plan, when complete, was apparently a "*fosleac*," or flag house, in an oval mound of clay, about 30 feet long and 20 wide, ranging S.S.E. and N.N.W. The internal arrangements consisted of a large chamber 21 feet long, 5 feet wide, and about 3·5 or 4 feet high. At the north-eastern end of the large chamber there is a small parallel one. The flag wall at the northward end of both chambers is gone, but most of the other walls are perfect. The entrance appears to have been at the southward end. The covering flag, *a*, appears to be in its original position, while *b* may be so also, having been the roof of the entrance, as it is not long enough to cross the chamber. The clay mound seems to have been originally surrounded by flags sloping outward, a few of which still remain.

In the flat maum or pass between Myshall Hill and Kilbrannish Hills, close to the south mearing of Myshall townland, Carlow, Sheet 17, are the remains of a structure, consisting of a circular mound, with a square chamber in the centre of it (fig. 1, Plate X.). The marginal circle of the mound was made of flagstones, each about 3·5 feet long, 2·5 feet wide, and ·5 foot thick, which were placed sloping inwards. These have been removed at the south and west. Of the chamber, which was 4 feet square, and about 3 to 4 feet high, there remains four massive granite slabs, forming the west, south, and east walls. With two small standing stones forming an entrance to the north, The two stones to the north do not look as ancient as the others, and may have been put in their present position when the chamber was converted into a sheep shelter, for which it is now used, by raising the walls with field stones and with the displaced marginal flags.

A little over half a mile to the north-west, in the village of Myshall, are the ruins of the ancient church of St. Bridget; while



less than half a mile to the north-east, surrounding the summit of Myshall Hill, is the site of either a liss or caher, 300 feet in diameter. Most of the old circular forts in the granite country were cahers—that is, had stone walls; usually they are locally called “round O’s” and rahs.

#### ACCAUN CROMLEAC, COUNTY CARLOW.

As the original use of many of the structures classed under the general name of cromleac is still obscure, I may be allowed to call attention to the structure in the County Carlow, commonly called the “big stones of Accaun,” and marked on the Ordnance Maps as a cromleac, because it has peculiarities from which its original use may possibly be conjectured.

The structure is in the townland of Harristown, a little south-east of Accaun bridge, and the ancient sites of Accaun church and monastery. It consists of two covering-stones (A and B, fig. 2, Plate X., figs. 1 and 2, Plate XI.), the northern, or largest, overlapping the other, under both of which is a regular chamber (c); while to the east of the entrance, which is at the north end, is a covered-in recess, which, for want of a better name, may be called an alcove (d). The covering-stones slope due south, and the alcove looks due north, but the general bearing of the chamber is N. 20 W.

Now, are we to suppose that this structure was intended to be either a sepulchre which was to remain exposed on the surface of the ground, or a sepulchral chamber buried in a tuaim, the covering earth of which has now been removed? Against such suppositions are the following:—The structure is such that, if exposed on the surface of the ground, foxes and other animals could have forced an entrance, and desecrated the dead; and if it has been buried in a mound of stones or earth, why should all traces of this have been so completely removed? In addition, we must observe that the entrance was evidently from the north; but in all the presumably sepulchral chambers that I have seen it is from the east or south-east. My suggestions in reference to this structure would be, that the covering-stones sloping due south, were used for some sort of sacrificial office. A few bundles of heather would make the chamber quite air-proof and comfortable, as may be seen in the shepherds’ or herds’ huts at the present day in the hills of West Munster and West Connaught. The alcove was evidently for some purpose—it might have been for the priest to sit in, or to address the people from, or as a place in which alms or other offerings were left. The improbability that the cover-stones were solely placed as a roof for the chamber and alcove appears to be disproved by their position and surface. These stones slope due south, and on their surfaces are irregular systems of cups and channels (fig. 1, Plate XI.). I am well aware that there are many who would say that these cups and channels are solely due to weathering, but how this could be I cannot understand. The channels are very like some of those that are not uncommon on the sloping surfaces of the Carboniferous limestone rocks, such as the crags of Limerick and Clare; but

these slabs are of granite, not limestone, and thousands of similar slabs of exactly similar granite will be found in this immediate vicinity; also in the neighbouring portions of the county Carlow, and also in the counties of Wicklow and Wexford, on the surface of which I have not been able to find any cups or channels at all like those on these covering-stones. I therefore am forced to believe that the cups and furrows were originally cut artificially on these stones, though they may have been more or less modified by weathering. If these furrows and cups are allowed to have had an artificial origin, they must have been made for some special purpose, which seems to me to have been in connexion with pagan sacrificial rites; and as the stones slope due south, I would suggest that they may possibly have had some connexion with sun worship. The conclusions I have arrived at are, that the structure was both a sacrificial altar and a habitation, thus partaking at the same time of the nature of a normal cromleac, or Druidical altar, and of a fosleac, or flag dwelling-place. Figure 2, Plate XI., sketch of the cromleac looking S.S.E.

#### DESCRIPTION OF PLATES IX., X., AND XI.,

*Illustrating Mr. Kinahan's Paper on Megalithic Structures, Counties Wicklow and Carlow.*

Plate IX., Fig. 2.—Plan of Labbanasigha, Wicklow, Sheet 42.

a and b. Cover-stones.

Plate X., Fig. 1.—Plan of structure, Myshall Hill, Carlow, Sheet 17.

„ Fig. 2.—Plan of Accaun Cromleac.

A and B. Cover-stones.

c. Chamber.

d. Alcove on the east of the entrance.

e and f. Standing stones at the sides of the alcove.

g. Standing stone to the west of the entrance.

Plate XI., Fig. 1.—Cover-stones, Accaun Cromleac, showing cups and furrows.

a. Portion of stone that has been split off.

b. Here there evidently have been fires lit in recent times.

It is said that some years ago, before the land was cleared of the natives, and made into a cattle farm, the St. John's Eve or Midsummer fires used to be lit on this cover-stone. This portion of the stone is flat, but its surface is very irregular, on account of the effects of these fires.

c. A naturally weathered joint line.

Both cover-stones slope due south; the north one at about an angle of 15°, and the south one at an angle of 20°. All the furrows that come down to the edges of the stones are continued from the surfaces down the sides, which could scarcely be due solely to weathering.

„ Fig. 2.—Sketch of Accaun Cromleac, looking S.S.E.

A and B. Cover-stones.

d. Alcove to the east of entrance.

c. Chamber.

e and f. Standing stones forming the alcove.

g. Standing stone to the west of entrance.

**XXXI.—ON THE BELL FROM LOUGH LENE IN THE ACADEMY'S MUSEUM.**  
 By WILLIAM BARLOW SMYTHE, M.A., M.R.I.A. (With Plate XII.)

[Read, May 22, 1882.]

LOUGH LENE is a fair sheet of water in the County Westmeath, extending about three miles from east to west, and about one mile from north to south. There are two wooded islands in the middle, which are my property: the larger, above an acre in extent, is called Turgesius' Island; the smaller, about half the size, and covered with ivied stones, probably the ruins of a house of retreat connected with the monastery of Fore, is called Nuns' Island. South-west of it lies a very small island, called The Castle, containing many stones, now forming a blind to watch from for wild ducks, and under one of which, last summer, a boy in search of eels came upon the beautiful bell which forms the subject of this Paper. Having a companion near, with whom he did not wish to share the treasure, he covered it up again, and returned alone for the spoil, which he appropriated, and after exhibiting it to his neighbours, as I have been told, he fortunately sold it to the Academy.

The site of its discovery is reported by tradition to have been that of a castle, to which Turgesius betook himself at night for security, passing his day on what is called Turgesius' Fort, a bold bluff about a mile and a-half to the west, commanding the modern road from Collinstown to Castlepollard.

Tradition gives Turgesius the worst possible private character, and an end similar to that narrated in some other prehistoric stories, viz. that wishing to marry the Christian daughter of O'Melaghlin, King of Meath, by whom he was long refused as a heathen, he at length terrified them into an arrangement, allowing her and fifteen ladies of her suite to meet him and fifteen unarmed attendants upon a small island in a small lake in Meath, of which Westmeath was then a part; but her ladies were youths, who slew Turgesius' followers, and took himself prisoner. He was said by some to have been drowned in Lough Uair, now Lough Uail (Lough Owel), near Mullingar; by others in Lough Annagh. Neither is many miles distant from Lough Lene.

Sir H. Piers, writing above two centuries ago, describes Lough Lene as separated from Fore town by fine rising arable ground, "into which, by a narrow and short channel, the lake sends a rivulet, which falleth into the bowels of the hill, and issueth on the other side thereof, in the town, and turneth an overshaft mill." Sir H. Piers tells of the multitude of small trout on the lake side of the stream, and of the "vain endeavour of one of his company to catch them in his boot, which could only fill with water and his companions with laughter." The rivulet, he says, runs on to Lough Glore and to the

Inny, and thence to the Western Sea. Returning to Lough Lene, he says: "We come again on as pleasant a water as any in Westmeath: at the east end issueth another considerable stream, falling into the river Deel, running to the Boyne, and so to the Eastern Sea. So we have one lake which by its two streams parteth the kingdom into two great semicircles."

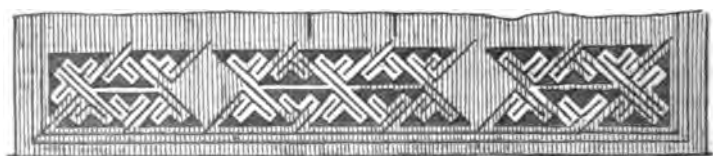
Fore was a place of great devotion; it contains the remains of three saints' churches, a monastery, and the church of an anchorite. St. Fechin was the patron saint of Fore. The translation of an Irish sonnet runs thus:—

"To Fore West let us go,  
That valley lying low,  
And see the mill,  
That, thro' the hill,  
To turn the mill,  
St. Fechin caused to flow."

It is said that when Tara was cursed by St. Rodanus, the King of Southern Hy Niall went to Lough Lene. In the Life of St. Aidan we read that he went, upon the entreaty of the parents, to intercede for their only son with the King of Meath upon an island in Lough Lene, which he had to reach by walking on the water, and that he gained his object. It is told of St. Fechin that he went to the castle of King Dermot, near Lene, to get him to receive a leper, whom he believed to be his Lord, who had come to his monastery. The king was the son of Aedh Slaine, who lived in an island called Muir Locha Leibhan, where the queen attended the leper's ailments, and got from him a staff for a crozier. Lough Lene, close to St. Fechin's Monastery of Fore, was then the place of a royal residence. MacCosse calls Melaghlín King of Lough Lene, as Irish kings were called Kings of Tara. The king probably occupied also the fort afterwards called Turgesius', who no doubt subsequently expelled the Milesian king from it. The fort is a bold barbaric bulwark, an oval of about seventy by fifty yards. St. Fechin died A.D. 664; Torquil or Turgesius lived about two hundred years later.

This bell may have belonged to St. Fechin in the middle of the seventh century, and was possibly transferred to the island called Nuns' Island at a later period. How it reached the stones of the old castle's foundations, where it was found, must be purely conjectural; but it was probably removed from Nuns' Island either for security, or as plunder, in the middle ages, by some one who did not survive to take it away. Giraldus Cambrensis, writing about A.D. 1200, says that portable bells and staves of the saints were held in great reverence by the people and clergy of Ireland, insomuch that they had much greater regard for oaths sworn on these than on the Gospels. Anderson, in the fifth of his valuable Lectures on "Scotland in Early Christian Times," a work kindly brought under my notice by Sir S. Ferguson, tells of a bell found in a cemetery at Birsay, in Orkney,

buried in a cist of dry stones, similar to those in which human bones were interred there, and so placed, probably for concealment, at a period when the Norsemen overthrew Christianity there for a time. The drawing represents it as somewhat similar in shape to our bell, which, I think, may have been buried in the Castle Island of Torquil, as the least likely place to be explored. It is a most perfect bell. It has the Christian emblem of the Cross faintly, but distinctly, marked upon it in outline on two sides. It has also an elegant traceried ornamentation engraved in the Celtic manner, forming a border. Two portions of this border will be seen represented in the figure on Plate XII., which is drawn to a scale of *one-third*; the ornamentation of the border, represented in the annexed wood-cut, is on the side opposite to the border seen in the Plate below the Cross; the ornamentation on the borders of the two sides without the Crosses are the same pattern.



The bells of that early period seem to have been generally quite plain, ornamentation being reserved for their cases or shrines.

The Lough Lene bell is very similar, as respects its size and general form and the design of its line ornamentation, to two other ancient bronze bells, viz. that found near the site of the Abbey of Bangor, county Down, about fifty years ago, which is now in the possession of Captain M'Cance, Belfast, and that found at Cashel, in 1849, which is now the property of Lord Dunraven. Illustrations of these two bells are given in "*Church Bells of Devon*," by Rev. H. T. Ellacombe, and one of the last mentioned is given in the "*History of Adare Manor*," by the Countess Dunraven. Petrie had never seen any bells like these. He declared them to be obviously contemporaneous, and believed them to be of the seventh century, and certainly not later than the eighth.

It may not be too much to say that these three bells are so similar to each other that it seems not unreasonable to believe that they were all made at the same place (though cast in three different moulds), and perhaps even ornamented by the same hand.

Petrie's opinion as to the age of the Bangor and Cashel bells lends countenance to the suggestion that I have independently thrown out above, that the Lough Lene bell may have belonged to St. Fechin of Fore, who flourished in the middle of the seventh century.

XXXII.—ON THE LEGEND OF DATHI. By SIR SAMUEL FERGUSON, LL.D., Q.C., a Vice-President of the Academy.

[Read, February 13, 1882.]

THE oldest historic writings of the Irish allege that, after the death of Nial of the Nine Hostages, who is said to have been slain during a predatory expedition into Gaul, about A.D. 405, his nephew and successor, Feradach,<sup>1</sup> afterwards called Dathi,<sup>2</sup> having followed his uncle's example in again invading the Continent of Europe, was killed by lightning at the Alps.<sup>3</sup> The date of this event is given by the majority of Irish chronologists at A.D. 428, being the first year of Leoghaire, Dathi's successor in the monarchy. Leoghaire's accession, however, is placed by the compiler of the Annals of Boyle at A.D. 426.

The direction taken by Dathi, further than that he followed in the track of Nial, and was killed somewhere "at the Alps," is not directly indicated in the older books now known to us.

Nial is said to have been slain on the banks of the Loire; and hence it has been supposed that Dathi's death took place somewhere in France.<sup>4</sup> An expression, however, in the poem ascribed to Torna Eigeas, said to be a cotemporary, which we find incorporated in the account of Dathi's expedition, in Lebor na h'Uidhre, taken in connexion with the then condition of Roman affairs in the Sub-Alpine provinces of the empire, offers a more tangible ground for conjecture. The bard, contrasting the then notoriety of the place of Dathi's death with the obscurity of his place of burial, refers to his death as having

<sup>1</sup> Keating gives Feradhach as the original name; on what authority does not appear (*Hy-Fiachrach*, p. 20).

<sup>2</sup> Both Keating and Mac Firbis regard Dathi as an *adnomen*, referring to his agility. Mac Firbis states he got the designation "in the East," that is, on the Continent. If so, a German or Frankish origin might be suggested.

<sup>3</sup> The old Irish idea of the situation and extent of the Alps may be collected from the Geographical Poem of Mac Cossa (*Book of Leinster Facs*, 136 a). Having spoken of Italy (*stail*), the author says:—

"Sliab Ailp et'ra is Gallia  
Muir in a timcholl a muirn  
Ota libaist co liburn."

Where *libaist* seems written for *ligaist* (*Ligusticum mare*), and the meaning appears to be—

"Between it (Italy) and Gallia the Alp mountain,  
[A wall, in a curve its groups?]  
From Liguria to Liburnia (Carinthia and Croatia)."

<sup>4</sup> It may be doubted whether Keating, who states it to have happened when Dathi was *ag deanamh congnais air an bh'-Frainge*, indicated the France of his own, or the Frank-land of Dathi's period.

occurred in *rig iath*,<sup>5</sup> i.e. "in royal land," an expression which, in its context, appears to point to some portion of the imperial territory, the Cæsar being usually designated in Irish compositions of this class *ri domain*, or King of the World. Roman territory at and on this side of the Alps, in Dathi's period, with the exception possibly of a narrow line of communication, accessible only by permission of the garrison of Lyons, and not likely to have been essayed by such invaders, can hardly be said to have existed anywhere from the Mediterranean to the valley of the Upper Rhine. Though the consul Ætius still held the central and northern parts of Gaul, the Goths at that time, with Toulouse for their capital, occupied Narbonne.<sup>6</sup> The Burgundians had extended their kingdom from Dijon to Geneva and the western parts of Switzerland.<sup>7</sup> The central plain of Switzerland was overrun as far as Lake Lemman by the Alemanni.<sup>8</sup> Helvetia had just undergone the second of its "ruinae" or desolations,<sup>9</sup> and possessed nothing to tempt the cupidity of an invader. Its chief attraction indeed at this time was for Christian hermits and recluses. The passion for ascetic seclusion was then at its height in southern Europe. A colony of monks, observing the rule of the Egyptian desert, had been led to the islands of Lerins,<sup>10</sup> off the Ligurian coast, between Toulon and Nice, where our own Patrick is supposed just about this time to have spent some years in probationary discipline.<sup>11</sup> From that extremity of the maritime Alps

<sup>5</sup> see *post*, p. 173.

<sup>6</sup> *Recueil des Hist. de France*, vol. i., p. 11.

<sup>7</sup> A.D. 406. 8<sup>vo</sup> Honorii. Hoc anno Burgundi et Neuthones, Germaniæ populi, facta in Galliam irruptione, Helvetiam occidentalem ab Ursa flumine, Genavam usque, cum provincia Sequana occupant (*Suiceri Chron. Helvet. apud Thea. Hist. Helvet.*, p. 11).

The Province Maxima Sequanorum included Besancon west of the Jura, and Neuchatel, Avenne, Basle, Windisch, Yverdon, and a port presumably on Lake Constance (Burchard *Notitia*, *apud Rad. de Diceto M. R. edn.*, vol. i., p. 6). I am unacquainted with Suicher's authority for Geneva.

<sup>8</sup> They had been allowed to settle in the country east of the Jura by Theodosius (*Vales. l. v.*, p. 237), and in A.D. 411, when Servius completed his Commentary on Virgil, were settled about Lake Lemman (Serv. in 4th Georgic).

<sup>9</sup> The first "desolation" had been in A.D. 300: some only of the restorations had been effected before the second:—"Allemanni irruptione facta, urbes Helvetiæ diruunt. Victi tamen a Constantino Chloro ad Vindonissam pedem referunt. Restaurantur urbes Helvetiæ; Forum Tiberii per Certum; Constantia per Constantinum, Virodurum per Aurelium Proculum et Tigurum per Decium urbis præfectum sub quo Felix et Regula Martyrium passi sunt Tiguri (*Suiceri Chron.*, *ibid.* p. 11).

<sup>10</sup> Dupin, *Eccles. Hist. ad init. quinti sæc.*

<sup>11</sup> The islands resorted to by Patrick, and called in his lives by the various names Alanenses, Aralenenses, and Tamerenses, which Mac Firbis, apparently founding on old Latin authority, puts "in Australi parte Gallorum, iuxta Mare Terrenum" (*Hy-Fiachrach*, 414), are considered with much probability to be these Insulæ Lerinenses (Todd's *St. Patrick*, p. 336, n.). The kind of life led there may be collected from the epistle of Eucherius to Honoratus (Dupin, *Eccles. Writers, 5th Century*, London ed., p. 117). He describes Lerins as a sweet place, full of fountains, overspread with herbs, abounding with most pleasant

the practice of anchoritism appears to have spread into those places made desert by the irruptions of the barbarians; and it will be convenient here, in reference to subsequent matter, to state that, in Helvetia especially, numerous recluses, including persons of noble birth, are recorded to have set up their hermitages, some in the wildernesses of the Jura,<sup>12</sup> some in Soleure,<sup>13</sup> and others among the ruins of the ancient Lausanum, whence the modern Lausanne takes what may be called its second origin.<sup>14</sup> Rhætia, however, with Coire, at the head of the Upper Rhine valley, for its western administrative centre, remained Roman till a later period in the same century;<sup>15</sup> and this state of facts, although absolute certainty cannot be claimed for it, may justify us in taking a first tentative step in search of any vestiges that may survive of Dathi's progress, in that region. Another provisional advance in the same direction, though not grounded on matter so ancient, may also be made on the authority of Duaid Mac Firbis, who, writing in 1650, with such aids of literature and tradition as were then at the disposal of a professional Irish historian, himself the hereditary chronicler of the descendants of Dathi, in his narrative, has this statement: 'Dathi went with the men of Erin over the Ictian sea towards (*dochum*) Letha, until he reached the Alps.'<sup>16</sup> Letha,<sup>17</sup> in this context, appears to mean Latium or Letha of Italy, at this time the common prey of the

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flowers, grateful as well to the eyes as smell, an abode fit for Honoratus, who first founded the monasteries, and had Maximus for his successor: Blessed Lupus, his brother Vincentius, and revered Capresis, and so many other holy old men, who dwell in separate cells, have made the life of the Egyptian monks to flourish amongst us. This letter was written on the occasion of Eucherius's return to the islands after visiting Honorat in the same year assigned to Dathi's expedition, 428. Is Honorat the Saint Senior of the Irish Patrician tradition?

<sup>12</sup> As *Pontius*; of whom see Müller, vol. i. p. 245.

<sup>13</sup> As *Eumanus* and *Cupicinus*, Burgundians of noble birth, *ibid.*, citing *Greg. Turon. Vitæ Pat.*, c. 1.

<sup>14</sup> As *Protesius*, a noble Venetian, *ibid.*

<sup>15</sup> Et hactenus Rhætia et Romanorum nomen imperiumque fuit. Nam postea Alemanni invaserunt qui circa Rhenum et Aconium sunt, et Romanos quidem expulerunt, Rhætos vero intra suos montes rupesque concluserunt; ita tamen ut pervios et prope subjectos haberent. [A.D. CCCCLX] Unde per Rhætiā Alemannos vastabundos descendisse cecinit Sidonius Apollinaris:

Conscenderat Alpes  
Rhætorumque jugo per longa silentia ductus  
Romano exierat populato trux Alemannus,  
Perque Cani dictos quandam de nomine campos  
In prædam centum novies diviserat hostes.  
(*Guillimann, de reb. Helvet.* 4<sup>o</sup> Amiterni 1623, p. 420).

The "Cani dictos de nomine" are the Grisons.

<sup>16</sup> Hy Fiachrach, 18.

<sup>17</sup> Letha (*a latitudine*, *Corm. Gloss.*) seems to apply generally to the whole expanse of the Continent of Europe, but particularly to certain districts of it ascertained by the context.



northern barbarian nations. The principal roads which invaders desiring to reach any part of Italy from these islands should pursue were as clearly defined in the fifth century as they are now;<sup>18</sup> for the passes through which alone roads could at any time be carried are limited in number and unchangeable in position. If, therefore, the nearest point at which sub-Alpine Roman territory could be reached was, as has been suggested, in the district of the Upper Rhine, there would be a reasonable presumption that the route by Coire and the passes of the Splügen would be that entered on by Dathi in this expedition. And this indeed is the route which early British and insular travellers are best known to have frequented. Coire itself claims the British Lucius as founder of its church in the end of the second century, and still preserves evidence of early Irish influence in its remains of Christian art.<sup>19</sup> This Alpine district also seems to have been known to the Irish legendary writers, as may be gathered from the passage in the *Tain bo Fraich*, where Connall Cernach and his companions, on their expedition to the Continent, are said to have gone "over the Ictian sea to the north of the Lombards, till they came to Slibte Ealpæ;"<sup>20</sup> and the tradition still preserved by the family of De Salis (*Macarín Excid.* 233), whose chief seat during the Middle Ages was at Marsch-lins, on the right bank of the Upper Rhine, that an Irish king on his journey to Rome on one occasion slept at their castle, evidences the continued user of that highway into Italy by the insular peoples.

The Upper Rhine valley, to which we have been conducted by this concurrence of hints and inferences, debouches on the Lake of Constance at Bregentz (*Brigantium*), where the highway from Italy through ancient Rætia divided, one branch leading northward to Augsburg and thence to the Lower Rhine, and the other, skirting the southern shore of the lake, westward and southward to Zurich (*Turicum*). A traveller to or from Coire might, however, adopt an alternative and shorter route by the defile of the Lacus Rivarius,

<sup>18</sup> The passes shown in the Peutinger map, and plotted out in the Itineraries are substantially the same as in a modern Bradshaw:—

- |                           |   |   |                                 |
|---------------------------|---|---|---------------------------------|
| 1. In Alpe Maritima,      | . | . | The Corniche road.              |
| 2. In Alpe Cottia,        | . | . | Mont Cenis.                     |
| 3. In Alpe Graia,         | . | . | The Little St. Bernard.         |
| 4. In Summo Pennino,      | . | . | The Great St. Bernard.          |
| 5. By Curia and Clavenna, | . | . | The Splügen, with its branches. |
| 6. By the Noric Alps,     | . | . | The Brenner.                    |

<sup>19</sup> It is impossible, at Coire, to contemplate the sculptured slabs dug up from the crypt of the cathedral, without agitating in one's mind the problem whether that interlaced work, with its ancient grotesques, be an evidence of Roman design travelling northward, or of insular fancy reacting on the taste of the conquerors. Of the Irish design of the silver and ivory shrines preserved in the sacristy there can be no question.

<sup>20</sup> Do cumlat ass a triur tar muir tar Saxam tuascirt. tar muir h'icht co tuascert longbard corancattar Slibte Ealpæ. (*Book of Leinster Facs.*, p. 252, a). Where the designation Saxam, given to Britain, limits the age of the piece.

now Lake Wallenstadt, which, leading eastward from the head of the Lake of Zurich, past the opening of the valley of Glarus (*Clarona*<sup>21</sup>), through a depression at the end of the Appenzell Alps, opens on the left bank of the Rhine about forty miles above Bregentz. The tribes who in Ptolemy's time occupied the point of junction, the *Saronici* and *Rigusci*, have left their names in the town of Sargans, where the railway junction now exists, and in Ragatz, five miles higher up, now the well-known health-resort for the adjoining baths of Pfeffers, the Fabaria of the Middle Ages.<sup>22</sup> Geographers are agreed in placing the *Castra Rhetica* of the Latin writers in the tract about the lower end of Lake Wallenstadt, in the district of *Gastern*; and the small towns of Tertzen and Quarten, on its southern, and Quinten on its northern bank, are accepted as marking the sites of Roman military stations. At Mollis, another small place between Quarten and Glarus, there was found in 1765 a hoard of Roman coins,<sup>23</sup> dating from the first to the third century, all indicating the existence of a well-frequented line of communication by this route in Roman times. Pfeffers claims for its founder a bishop Firmin or Firmin, once of Metz.<sup>24</sup> The name is not preserved in the abbey itself, but in the adjacent village of Saint Perminsberg, which stands higher up the mountain, both places being in the immediate vicinity of Ragatz. Leaving Ragatz for Zurich by the route which has been indicated, one passes through or near a number of towns and hamlets in the neighbourhood of Lake Wallenstadt, of which, for the purpose of this inquiry, it will only be necessary, in addition to the places already mentioned, to notice Wangs, Flums, Wallenstadt, which in the last century was Wallestadt, at the head of its lake, and Grinau at the head of the Lake of Zurich.

We are now in a condition to judge how far what has been premised may be found in accordance with the story of Dathi, as it exists in its oldest-written form in our now well-known eleventh-century manuscript, the *Lebor na h'Uidhri*. The text is accompanied by a gloss

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<sup>21</sup> It is "vicus Clarona" in Florencius' account of the martyrdom of Felix and Regula, an event for which an antiquity going behind the date of Dathi has been claimed. (*Guillemann in Thes. Hist. Helvet.*, p. 109 a.)

<sup>22</sup> Guillemann's description of Pfeffers in the beginning of the last century is deserving of preservation:—*Omnium (aquarum) magis mirandæ Fabariæ, a vicino Benedictenorum cænobio nomen sortitæ. In Racantiorum ambitu, intra montium fauces, portentoso aspectu, additu difficiles, infernali trucique situ; ac velut horrendo in barathro, strepitu præterlabentis per vicinia saxa cautesque fluvii, et continuo ruentis aquæ impluvio pulsantur. Nec deterret ea loci facies ab ingressu, cum frequentes eo moribidi conveniant. Mirum vero periculum homines sanitatis facere, ut sanitatem acquirant: quis namque inter fœtorem, fumos, contagia, speret morbos depellere, cum ex ipsis fiant? Fingunt tamen exempla miseri et credunt, anatosque audiunt semper alios, se vident nusquam.* (*Helvetiorum Republica*, 12<sup>o</sup>. Leyden, 1627, p. 492.) The ink-black colour, in time of flood, of the Tamina is the only feature wanting to complete the picture.

<sup>23</sup> Müller, *Hist. de Suisses*, vol. i., p. 334.

<sup>24</sup> Bucelin, *Rhetia Etrusca ad An. 717*.

in a handwriting, as O'Donovan judged, nearly equally ancient. It may indeed be a cotemporary transcript of an older edition of the text already glossed. There are other editions of the narrative in later Irish manuscripts; but though these be later in transcription, and some of them in compilation, it is not to be concluded that they are necessarily derived from less ancient material. I offer no excuse for the baldness of the translation, which savours of the almost prehistoric rudeness of the original.

Aided Nathi agus a adnacól inso.

Rogab Nathi mac Fiachrach heriad agus roinsaid

co aliab nelpa. <sup>ri</sup> Formenus <sup>ri</sup> tracia tanic  
dia ailithri co aliab nelpa isiad amairis.

Do rigned leis tor <sup>i. do fothub agus clochailb</sup> cathrach agus sesca traiged

a airde agus oen traig dec uadsom co solsi agus ro boi

.i. is de atbertea  
an awim sis fris conid  
dathi a awim on dni  
is dathi gabalaid.

<sup>i. Formenus</sup> seom im medon in tuir agus ni aced gnim na solsi. Tanic

<sup>i.</sup> tra Nathi cosin tor. roscailset tra muintir Nathi in Tor  
agus ro airig formenus in gaith chuca. ruc tra dia uadib

<sup>i. mile chemend on sleib sis ata Formenus.</sup> formenus in adluim thened mile chemend on tor agus roguid

formenus in comdid nabiad flathius dathi ni bad sia

<sup>i. Nathi</sup> inna sis agus roguid nabad ardaire a ligi nirabi tra  
do saegul oc ond rig acht airt robas oc taithmech  
na cathrach in tan tanio saiget gelan do nim chuci  
co fuair a bas. Gabaid tra amalgaid cernacht fer

<sup>i. da amalgaid robatar awd .i. amalgaid mac fiachrach agus amalgaid mac Nathi.</sup> nerend agus atnaig corp a athar leiss. Noi catha ro

<sup>i. MacNathi</sup> brissaitar rempu an air. in deseib temrach tra fuair amal

<sup>i. Cath corpair</sup> gaid a bas. Tucad tra corp dathi aniar co ro ad  
Cath cinni. Cath faili naiced he i cruachain. Cethror dan da ses grada  
Cath miscaill. Cath larraed. Cath Corde tucsat in corp leo .i. dungalach agus flandgus tomal  
Cath Moli. Cath grenis. tach agus tuathal. co fil for lar oenaig cruacan.  
Cath fornar. isiat sis ammuil ro follsag torna eces. Celis cach a cruacho  
na catha ro maid chroderg coem ri herin dathi mac fiachrach fial ri  
setar re nathi ar muir ar tir techtastar cach cara rig iath ra  
sria na thaisbenad ortar cach ni cheil. Celis cach  
dona sluagaib  
is e marb.

and further on, referring to the incident of the tower :—

In noem ar togail a muir atrubairt fris in a ruin  
a ligi no a lecht and nibad airdaire a cruacho.

That is to say, in literal translation :—

The death (*Aided*, query *Edda*?) of Nathi and his burial here.

Nathi, son of Fiachra, took [reigned over] Erin, and invaded to the Alp mountains. Formenus, king of Thrace, came on pilgrimage to the Alp mountains at that time. There was made by him a castle tower, and sixty feet its height, and

eleven feet outwards from him to the light, and he was himself in the middle of the tower, and perceived not a ray of the light. Then came Nathi to the tower.

\* Then the followers of Nathi demolished the tower. And Formenus perceived the wind [outer air] about him. Then Formenus was snatched from them in  
i.e. a thousand paces from [that] mountain downward is Formenus.

a flame of fire a thousand paces from the tower. And Formenus prayed the co-God-  
i.e. Dathi's

head that the reign of Dathi might not be of long continuance, and that his grave

might not be conspicuous. The king enjoyed life only while he was destroying the castle, when a flash of lightning came from heaven on him so that he died. Amal-  
i.e. there were two Amalgaid, i.e. Amalgaid son of Fiachra, and Amalgaid son of Dathi.

The Battle of Corpar,  
B. of Cinne, B. of  
Faili, B. of Miscail,  
B. of Corde, B. of  
Moli, B. of Grenis,  
B. of Fornar. These  
are the battles which  
were won around  
Nathi, through the  
exhibition of him to  
the hosts, and he  
dead.

gaid then took the command of the men of Erin, and carried away the body of his father with him. Nine battles were routed before him in the east. In the Decies of Tara then Amalgaid died. Then the body of Dathi was carried to the west, and he was buried at Cruachan. A company of four men of noble rank brought the body with them, i.e. Dungalach and Flangus, Tomaltach and Tuathal, so that he is in the mid-floor of Aenach-Cruachain, even as Torna Eces manifested: "Thou concealest from all,

oh Chruacha Croydery, the comely king of Erin, Dathi son of Fiachra, true king, by sea, by land. It has been testified to all that it was in royal land the king died. From all I do not conceal it. Thou concealest from all," etc.

#### And again :

The Saint, upon the demolition of his wall, said to him, in prophetic strain,  
That his grave nor his gravestone should not be conspicuous, oh Cruachan.

It only remains to observe that the name Formenus and Formenius of these tracts is given as Parmenius by Keating, and as Sanctus Firminus by O'Flaherty, in order to perceive the relevancy of a characteristic expression in one part of the gloss-writer's commentary, which seems to afford us the first positive key to the situation. When, in Irish hagiological writing, this form of expression occurs—such a one "is" in such a place—it signifies, not that that person is still living, but that he is there buried, or that his relics are there preserved, or that his name is there venerated; and this, generally, in some church of his foundation.<sup>28</sup> Now the gloss-writer here, commenting on that part of the text which describes Formenus as being rapt away a thousand paces from the tower, uses these words: "That

\* I do not attempt a literal translation of the first gloss, which is very obscure in the original, but which appears to correspond with M'Firbis's statement, that he had the name of Dathi, from his activity in catching (on his shield?) the weapons thrown against him.—(*Hy Fiachrach*, 21.)

\* See the Irish *Acta passim*. A remarkable example is found in the Tripartite Life of St. Patrick, where certain saints, after the removal of their relics from Donard in the county of Wicklow, are said still to be *there*:—"The third [church erected by the disciples of Palladius] is the church which is called *Dominica Arda*, in which 'are' holy men of the companions of Palladius, viz. Sylvester and Solinus, whose relics after some time were carried to the island of Bocthin, and are there held in merited honor." (Todd's *St. Patrick*, p. 297.) This form of expression has led to the erroneous belief that the authors and the persons named as being in such and such churches were cotemporaries.

is, a thousand paces from the [that] mountain downward, Formenus is," being tantamount to the affirmation that there exists a church wherein the memory of Formenus is venerated, or where his relics are deposited, lower down the mountain near the place where Dathi met his death on that occasion. There is no ecclesiastical foundation of any Formenus or Firminus in any part of the whole region of the Alps but the one ascribed to Firmin at Pfeffers; and, in point of fact, that church of Pfeffers does stand about the distance in question below the village and height of St. Perminsberg in the region to which the inquiry *d priori* has so conducted us. This fact of the existence of two places—one the hermitage of the recluse on the height, and one the church, ascribed to a founder of the same name, on the lower slope of the mountain—has obviously been regarded as a circumstance necessary to be noted in the story. Mac Firis thus refers to it in his version of the legend:—"Formenius then went a thousand paces down from that mountain and dwelt in another habitation,"<sup>25a</sup> both statements importing the existence at St. Perminsberg of an anchorite called Forminus, Formenius, or Firminus, previous to the foundation of the great church of Fabaria.

The gloss-writer, having thus pointed at a place lying on the track which Dathi has been, so far, presumed to have followed, goes on to give other topographic indications which, so far as resemblances of names after the lapse of so many centuries can be relied on, appear to confirm the first identification, and to localize the scene of the invaders' retreat in the district which has been described as extending from Ragatz and Sargans to the head of the Lake of Zurich. Commenting on the *noi catha* of the text, he gives a list of the nine battles fought by the Irish under Aulay, as they withdrew, on their return journey, carrying with them the dead body of the king. These are the names, in their nominative cases which he enumerates:—

- |            |             |            |
|------------|-------------|------------|
| 1. Corpar. | 4. Miscal.  | 7. Moli.   |
| 2. Cinne.  | 5. Larrand. | 8. Grenis. |
| 3. Fale.   | 6. Corde.   | 9. Fornar. |

It may be doubted whether Corpar be the name of a place or a name descriptive only of the strife about the dead body of Dathi, *corp-ar*, i.e. "body," or "corpse-slaughter." The name is not found in present topography either here or, so far as diligent search enables me to speak, anywhere in the Alpine or sub-Alpine region. Neither has Miscal or any name apparently representing it been found. But of the remaining seven names five certainly present a close agreement in sound and local collocation with existing names of places already enumerated on the route from Ragatz by the Wallenstadt defile towards Zurich.

<sup>25a</sup> *Hy Fiachrach*, 23.

*Larrand*, *Corde*, *Moli*, and *Grenis* of the list have such a correspondence with *Clarona*, *Quarten*, *Mollis*, and *Grinau*, as to afford ground for conjecturing that *Fale* is also represented by the *Wallestadt* of the last century.<sup>26</sup> Of these it may be observed that *Quarten*, which in the last century was *Quart*,<sup>27</sup> *Mollis*, and *Grinau*, stand relatively to one another in the same sequence as *Corde*, *Moli*, and *Grenis*. This collocation is the more remarkable because, though there are numerous *Mols* and *Mühls* scattered through the Alpine neighbourhoods, there is not, so far as I can learn, any other *Quarten* or *Grinau*.<sup>28</sup>

Before dealing with the remaining names *Cinni* and *Fornar*, enumerated by the gloss-writer, reference may be made to another list, apparently derived from an independent source, which *Mac Firbis* has given in his version of the story. He also mentions nine battles, but, in enumerating them, gives ten names, beginning his list also with *Corpar*, which may be an additional reason for regarding that name as descriptive only and not topographical. He follows the same order in the remaining names, save that he introduces after *Cinni*, which he makes *Cime*, or *Cingi*, the additional name of *Colom*; gives *Corde* in the form *Corte*; for *Larrand* has *Lundunn*; and for *Fornar*, *Fermer*. There is a small place, *Lunden*, above *Marschlin* in the *Landquart* valley,<sup>29</sup> on the right bank of the *Rhine* opposite *Ragatz*. *Fornar* and *Fermer* are names with which I am unacquainted. They may be corrupt forms of *Ferner*, "a glacier," of frequent occurrence in the *Tyrol*, but not now, so far as I know, surviving west of the *Inn*.

The *Cinni* of the gloss-writer seems to offer itself more feasibly for purposes of comparison, in the form *Cinge* given to it by *Mac Firbis*. As regards *Cinge* and the *Colom* of the same writer, reference may be made to a class of monosyllabic names of places ending in *s*, contracted from older forms, characteristic of the whole of the Alpine region, such as *Prims* (*Prima*), *Worms* (*Bormium*), *Stelfs* (*Stelbium*), *Cles* (*Clusium*), *Lins* (*Lindum*), &c. Whether *Cingi* and *Colom* may not have their representatives in the present *Wangs* and *Flums*<sup>30</sup> I do not venture to affirm or deny. It seems difficult, in presence of so considerable a number of agreements between the Irish lists and the existing local nomenclature, to doubt that a tradition of *Dathi* having penetrated as far as the neighbourhood of *Ragatz*, and of his followers, after his death, having made their retreat by way

<sup>26</sup> (*De l'Isle, Charte de la Suisse*, Paris, 1715). *Plantin*, in his *Helvetia*, Leyden, 1627, 16<sup>mo</sup>, p. 300, makes *Wallenstadt quasi Italorum Oppidum*, as we should say in this country, *Gaulstown*, which is also the opinion of *Guillimann* and *Stumpf*.

<sup>27</sup> Same map.

<sup>28</sup> *Grinau*, the *Grinovium* of late middle age records, stands on the south shore of the lake of *Zurich*.

<sup>29</sup> *H. Keller's Reisecharte der Schweiz*, Zurich.

<sup>30</sup> Thought by *Guillemann* and *Plantin* to be a Roman *ad Flumen*. And the Commune is called *Plebs ad Flumina* in ancient documents.

of the Wallenstadt valley, existed in Ireland previous to the date of the *Uidhre* glosses.

A vast anachronism, however, would be committed in making Dathi cotemporary with the St. Pirmin of Swiss history, who is credited with the foundation of Fabaria, A.D. 717.<sup>31</sup> If there were anything in the life of this eminent ecclesiastic<sup>32</sup> at all corresponding to the adventures of the Formenus of the text, it would be difficult to avoid the conclusion that the achievements of some Frankish freebooter of the eighth century had been ascribed to the Irish king of the fifth, and that the list of localities inscribed in *Uidhre* has been the fruit of some mediæval traveller's observation, picked up at Pfeffers, and contributed as an embellishment to the bardic romance. But there are few mediæval saints whose lives exhibit less of the marvellous than does that of Permin of Metz. He was not a king. He never seems to have led a heremetical life. Thunder or lightning find no place in any of the incidents related of his active evangelical career. He died at Fulda, in the abbey of his friend the great Boniface, whence his remains were transferred to Hornbach, and afterwards to Innsbruck, where they are still preserved.<sup>33</sup> Were there then two Pirmins—the hermit of St. Perminsberg and the evangelizing bishop of Fabaria? And is it to the former of these persons and places the gloss-writer refers when he says, Formenus "is" there; and Mac Firbis refers, when he says Formenius, after leaving his tower, went a thousand paces down the mountain, and there dwelt in another habitation?

It is a singular circumstance that Eichorn,<sup>34</sup> in his history of the diocese of Coire, writing in 1797, in ignorance of the Irish tradition, should have been led to question whether, previous to the arrival of Permin of Metz, there were not already certain Christian anchorites residents of St. Perminsberg. What raised that question in his mind was a tradition which, curiously enough, is conversant with a shift of the site of the original dwelling, purporting that Pirmin began the first construction of his monastery at Marschlins, but that, following

<sup>31</sup> Bucelin puts it at A.D. 717; Eichorn at or after 724.

<sup>32</sup> The Benedictine *Acta*, vol. iv. p. 152 last edited by Mone (*Quellensammlung der Badischen Landesgeschichte*, vol. i. p. 31). The original ms. is in the library at Einsiedeln.

<sup>33</sup> Mone, *ibid.*, p. 36.

<sup>34</sup> Originem suam debet Fabaria S. Pirminio sicut et Augia dives. Legi in veteri dissertatione quadam prima monasterii fundamenta circa annum 713 vel 717 posita fuisse et in Martislinio seu Marschlins, ubi modo cum arce pagus est; sed, opere vix capto, columna, ut fertur, locum monstrante (quæ, eapropter, Fabariensium insignie est) trans Rhenum in monte super Ragatiam cella extructa perhibetur, ubi hodieum monasterium prominet. Quæ, si vera sint, quosdam vel anachoretas vel monachos ante Pirminii adventum Fabariam inhabitasse necessum est; nam præsul iste demum anno 724 in Germaniam venit. (*Episcopatus Curienensis*, 4<sup>o</sup>, 1797, p. 266). I fail to follow the reasoning of Eichorn, and must either suppose that some language importing that the memory of another holy person of the same name was venerated at the place, has been dropped out of his printed work, or conclude that his argument rests on no substantial basis.

the guidance of a dove, he transferred his operations to the height above Ragatz. Bucelin also, in his *Rhætia Etrusca*,<sup>26</sup> has got the same story, but in a form which helps the inquiry only so far as it implies that Pirmin's first erection at Pfeffers was a wooden structure, and so the less likely to be the same as that referred to in the Irish legend. He gives it with the addition that, some of the workmen having cut their fingers, the dove showed the way by carrying off the bloodied chips to the opposite bank of the river; whence the dove in the armorial shield of Pfeffers. It may be observed that in Irish  $\gamma\gamma$  and  $\gamma\alpha\gamma$  signify "down" and "up" respectively, and are often liable to transposition through errors of transcription.

Up to this point, therefore, continental inquiry has supplied nothing corroborative of the Irish story which would not also be consistent with a post-eighth century origin; and, if the matter rested here, the substantial part of the legend, detailing events of the fifth century, would probably be regarded as resting only on the precarious authority of Irish bardic romance. The period in question is one of the darkest in European history. It is too late for the western writers, Ammianus Marcellinus, and Orosius, and too early for Paul Deacon. It falls, however, within the range of the cotemporary ecclesiastical historians, Socrates and Theodoret, and these writers both record matter so pertinent to the subject that some surprise may be felt at its not having hitherto been noticed in this connexion. Socrates begins his history at A.D. 309, where Eusebius ended, and brings down his narrative to A.D. 440. Having related the occurrences which took place after the death of Honorius and the attempt of the Secretary John to usurp the succession, for which purpose he had cultivated the good will of the Hunnish tribes settled in Pannonia, as also John's defeat and death in A.D. 425, he proceeds to state: "After the death of the tyrant, the barbarians, whom he had called to his assistance against the Romans, made preparations for ravaging the Roman province. The emperor, being informed of this, immediately, as his custom was, committed the management of the matter to God, and, continuing in earnest prayer, speedily obtained what he sought; for the following disasters befel the barbarians:—Rougas, their chief, was struck dead by a thunderbolt. Then a plague followed which destroyed most of those who were under him; and, as if this was not sufficient, fire came down from heaven and consumed many of the survivors. . . .

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<sup>26</sup> Bucelin was Prior at Feldkirch, and likely to be well acquainted with the local traditions. His account is as follows:—Pirminio hortante, . . . fervide opus agitur.—Dum fabri lignarii, utrumque cauti, cavere tamen satis vulnera nequeunt, dum trabes scindere et aptare conarentur, nec sine prodigio comperentibus niveo candore columbis quæ non alias assulas ac fragmenta cum sanguine fabrilis tincta collegere, et congeminato sæpius volatu atque ablatis sanguine notatis assulis trans Rhenum in editi montis sinum evolare, eademque uno loco deponere deprehensæ sunt. Quo prodigio S. Perminius moveri se sensit non Marcellinii sed notato prodigio loco Deum sibi condendo cœnobio aream eligisse . . . eo sumptibus et labore conversis, &c. (Bucelini, *Rhætia Etrusca*, 4<sup>o</sup>, Augsburg, 1666, p. 148.)



On this occasion Proclus, the bishop, preached a sermon in the church which was greatly admired, in which he applied a prophecy out of Ezekiel [xxxviii. 2, 22, 23] to the deliverance which had been effected by God in the late emergency. This is the language of the prophecy: 'And thou Son of Man, prophesy against Gog, the Prince of Rhos, Misoch, and Thobel,'" &c.<sup>36</sup>

Proclus did not attain the episcopal rank till 426,<sup>37</sup> so that the event described may be set down as not being earlier than that date. Theodoret begins his history at A.D. 322, and ends at 428, and he relates the same occurrence,<sup>38</sup> like Socrates, without specific date. The event, therefore, cannot have been earlier than 426, or later than 428, and is thus brought within identically the same chronological limits in Byzantine as in Irish history. Theodoret, who wrote in Asia Minor, at a greater distance from the scene of the event than Socrates, describes the invaders (l. v., c. xxxvii.) as Nomad Scythians, who had crossed the Danube under the leadership of Roilas, who, he agrees, was slain by a thunderbolt, vouchsafed to the prayers of Theodosius on that occasion, and lays the scene of the event in Thrace. The same story, varying the name of the leader as Roas, Roilas, and Rugilas, is told by the later ecclesiastical writers Nicephorus and Epiphanius Scholasticus, all apparently grounding on the original narrative of Socrates.

It appears in the highest degree improbable that two leaders of two barbarian incursions over the Roman frontier should both have met their deaths at or about the same time in a manner so exceptional; and probably the conclusion of most minds will be that, whether it be the disaster of the Hun applied to the Scot by Irish, or that of the Scot applied to the Hun by the Byzantine chroniclers—whether the thunderbolt was accorded to the prayers of the Byzantine emperor or of the Alpine hermit—the event in both sets of annals is one and the same. In any case, it cannot be denied that the concurrence of historic notices so respectable adds materially to the interest of the Irish story, and requires for it a more serious attention than probably it ever would have received if standing only on Irish bardic authority.

Circumstantiality of detail, in a narrative of respectable antiquity, is certainly presumptive of genuineness; and it is remarkable that the item in the Byzantine account which may best claim the credit of circumstantiality, the mention of the leader's name, is that which, in the estimation of critics, has chiefly brought the entire statement into question;<sup>39</sup> for Rougas, Roas, Roilas, or Rugilas, a noted leader of the Huns, and uncle of Attila, certainly did not perish on the occasion in question, but lived to dictate terms of peace to the Romans, at a later stage of the war, and is recorded in the annals of Prosper, a co-

<sup>36</sup> Socrates, *Ecl. Hist.*, l. vii. c. 43.

<sup>37</sup> Socrates, *Ecl. Hist.*, l. viii., c. 43.

<sup>38</sup> Theodoret, l. v. c. 137.

<sup>39</sup> Gibbon, c. 34.

temporary, to have died in 434; and it may be that Socrates's *Rouglas* is but *Rouglascois* misunderstood, and designates, not the object, but the place of the catastrophe.

The Huns in Pannonia appear to have crossed the frontier and invaded the imperial provinces in great force immediately—within three days it is said—after the death of John, which took place sometime in the summer of 425. This seems to be the movement of the friends of the usurper referred to by Socrates, but can hardly have been the occasion on which their leader was struck by lightning; for that seems to have been subsequent to Proculus's episcopate, and these discrepancies, it must be allowed, do somewhat detract from the particular accuracy of his narrative (*Anc. Univ. Hist.*, 16, p. 216, citing Philostorgius, p. 538, and Cassiodorus).

It is also observable that although Proculus regarded the invaders as Huns, or rather indeed as a horde of Russians, Theodoret's description of them as wandering Scythians would be equally applicable to the Scots of the Irish chronicles, and that the passage of the Danube would be equally incidental to their progress if we suppose them, declining the neighbourhood of the Roman legions, to have reached Rætia through the country of the still Pagan Suevi, and of their own kindred tribes of the Brigantes, also Pagans.

Having the attention thus quickened to the value of the Irish material, it will be less tedious to proceed with its remaining incidents. The gloss-writer, at the close of his list, adds:—"These are the battles that were gained around Dathi, through his exhibition to the hosts, and he dead." This refers to a statement, not found in *Lebor na h'Uidhri*, but detailed with much curious minuteness as well as picturesqueness by Mac Firbis:—

"Mur do ñonnadar fir Ereann sin, do ñuirsiad sbongc re lasad i m-beol an rig ionnus go saoilfead gaç aon go m-bet 'n-a beataid agus gur ob i a anail do bet ag tea't tar a beul . . . Gabas tra Aimalgaid mac Dati ceandus fear n-Ereann, agus adnaid a atair les ar iomcar, gur ro bris naoi g-cata ris for muir, agus dech g-cata for tir, agus sé marb, a' uil do taispendis a muintir fen corp an rig, ro mugiead rompa for na sluagaib teagimað riú."<sup>40</sup>

"When the men of Erin perceived this (the death of Dathi), they put a lighted *spone* in the King's mouth, in order that all might suppose that he was living, and that it was his breath that was coming out of his mouth. . . . Amhalgaidh, the son of Dathi, then took the command of the men of Erin, and he carried the dead body of his father with him, and he gained nine battles by sea, and ten battles by land, by means of the corpse; for, when his people exhibited the body of the king, they used to rout the forces that opposed them."

Strange as this device for inspiring terror into an enemy may seem, it is not without parallel in what Florus has told us of the centurion Domitius, or Cronidius, who, in the Dalmatic war, in Augustus's

<sup>40</sup> Hy Fiachrach, 22.

time, attached some kind of chafing-dish, filled with combustibles, to his helmet, so that the superstitious Mysians conceived some supernatural being to have come amongst them crowned with flames.<sup>41</sup>

What has been said of other recluses will have lessened any surprise at the presence of the royal hermit in this story. Nor is there anything in the description of his tower in the text inconsistent with authority or example. His tower may be inferred to have been a round one, agreeably to the instruction for building fortress towers given by Vitruvius.<sup>42</sup> In that part where he dwelt, presumably on the ground-level, as being the object of a predatory attack, there was no access for light; whence we may infer that the door to the interior existed at a considerable height from the ground, being the method of construction found in all the oldest examples of such detached towers, here and on the Continent.<sup>43</sup> The facility with which the soldiers of Dathi broke through the wall may be accounted for by a circumstance, noted by the gloss-writer, and repeated in other editions of the story, that the tower was built "of sods and stones," meaning possibly that its stones were cemented with clay,<sup>44</sup> or, more probably,

<sup>41</sup> Non minimum terroris incussit barbaris Domitius centurio satis barbære, efficacis tamen apud paris homines stoliditatis, qui foculum gerens super cassidem, suscitatum motu corporis flammam velut ardenti capite, fundebat. (*Flori Epitom.*, l. iv., c. 12, s. 16.)

<sup>42</sup> Turres itaque rotundæ aut polygoniæ faciendæ: quadratas enim machinæ cellerius dissipant, quod angulos arietes tundendo frangunt: in rotundationibus autem (ut cuneos) ad centrum adgendo lædere non possunt. (*Vitruvius de Arch.*, l. i. c. 5.)

<sup>43</sup> As, with one exception, in all the Irish ecclesiastical towers, and uniformly in the military donjons ascribed to the twelfth and later centuries, but some of them much older, on the Continent. Where an under-storey exists in these, it is wholly without illumination, and only approachable by a trap-door in the first vault or flooring. A recluse in such a habitation might well be described as being so many feet from the daylight. For tours-recluses, see Eustathius, ed. Tefel, p. 189.

<sup>44</sup> The use of clay both for cement and as building material was common among the barbarian nations. The wall of Severus repaired by the Britons, "factus non tam lapibibus quam cespitibus, non perfecit" (*Gildas' Hist.*, c. 12). The earthen wall of Nurshivan, between the Black Sea and the Caspian, appears to have been a better work, the remains exhibiting the consistency of concrete (*Anc. Univers. Hist.*, vol. 5, p. 363 n). S. Patrick constructed an early Irish church of clay, because wood was not at hand, at Foirrages in Tyrawley (*Book of Armagh*, fo. 14, b. 2). Clay churches stood at Valladolid in Spain till the eleventh century, when they were rebuilt, some in brick with clay mortar, and some in stone, by Kings Adelphonso 5th and Ferdinand respectively (*Du Cange, Lutum*). Many of the topes of India are cemented with clay (*Mitra, Buddha Gaya*, p. 102); and the old castle of Tintagel on the coast of Cornwall, which has so long withstood the storms of the Atlantic, is held together by no better binding material. The "sod-wall" is of traditional use in Ireland. "Their houses are of several sorts, but the most common is the 'sod-wall,' as they call it. By sods you are to understand the grassy surface of the earth. Some build their houses of mud, and others use stone without mortar for two or three feet from the ground, and sod or mud for two or three feet on the top of that." (*Complete Irish Traveller*, 8vo, London, 1788, vol. ii., p. 16.)

that on an understructure of stone a clay upper storey was erected. The definite dimensions given in the text, from which the building appears to have been twenty-two feet in diameter and sixty feet high, will, to most minds, convey the impression that the story, wild as it is, originates in some foundation of fact. The tale, as told in the Book of Lecan, may now be compared with the above extract from *Uidhre*. That the one document is not copied or abridged from the other appears by a discrepancy in these dimensions, the distance of the dweller in the middle of the tower from the light being eleven feet in the tract in *Uidhre*, and seventeen feet in that of the "Book of Lecan,"

"Dogob iarum Dathi mac Fiachrach mic Echach Muirdmedoin rigi n-Erend re secht mbliadna fichet, corthabaid in boroma cen cath. Nocortriall soir for lorg Neill, coranic co aliab n-Elpa. Corothecaim do annain tor i roibi Formenius ri traicia iar facbail a rigi, agus iar toga na beatha coimdeata isin torsiin, coroibi seacht cubaid deg soillsi uada. Corothogailsead Muinter Dathi a thor fair, co facaid soillsi i aligi na togla, coroflarfaid Formenius, cia doroinde in togail, olse. Dohindisead corbe Dathi cona Muinter doroinde in togail. Doguidistair Formenius intaen[d]ia nach beith flaithius Dathi ni bud faidi na sin. Cotanic soiged gelan do nim tre guidi an fireoin, cor marb in rig a fiadnaisi int [s]luaig. Airmid eolach corab e Formenius fen do dibraic saigid a fidbac 7 corob di fa marb in rig. Ocus adearar corob don t[s]aigid hisin romarbad Niall mac Echach iarum. Cotucsed fir Erenn corp in rig leo co hErind 7 ceathrar da aes grada fen oca iomchor .i. Dungus ocus Flandgus, ocus Tuathal ocus Tomaltach. Corobris deich catha o aleb elpa co hErind, ocus se marb cen annain."—(*Book of Lecan*, p. 602 d.)

"Dathi, son of Fiachra, son of Eochaid Murchmedhon, took the kingship of Erin for twenty-seven years, and exacted the *Boru* without contest. He ventured eastward on the track of Nial till he came to the Alp mountain, and reached there a tower wherein was Formenius, king of Thracia, who had left his kingdom and chosen a holy life in that tower, where it was seventeen cubits to the light from him; whereupon the people of Dathi demolished the tower about him, so that he saw the light in the aperture of the breach. Whereupon Formenius demanded who made that demolition, and it was answered that it was Dathi with his people that made the demolition. Then Formenius prayed the One God that the reign of Dathi might endure no longer, and there came an arrow of lightning from heaven through the prayer of the holy person, so that it killed the king in the presence of the host. (The learned say that it was Formenius himself that discharged the arrow from his bow, and that it was by it the king was slain; and they say it was by this same arrow that Niall son of Eochaid was slain.) However, the men of Eriu took the king's corpse with them to Eriu, and four of his own men of trust bearing, that is Dungus and Flandgus, and Tuathal and Tomaltach, so that he broke ten battles from the Alp mountains to Eriu, and he dead without life."

As regards Formenius, Parmenius, or Firminus himself, it appears impossible to identify any king of Thrace with a personage of that name. A Thracian connexion might indeed be claimed for the Franks, who most probably at that time were seated not far from the scene of Dathi's disaster; seeing that only fifty years afterwards they are set down by Stephen of Byzantium as "a nation" presumably settled

"near the Alps;"<sup>44</sup> and are found in this particular Alpine region two centuries later, when St. Permin, we are told, in his ministrations, had to make use of the Latin and Frankish languages. Their own national tradition brings them from the East by the banks of the Danube "juxta Thraciam," and it is certain that in the third century some part of Thrace was allotted to and occupied by them as a settlement.<sup>45</sup> It may therefore not unreasonably be inferred that if a Frankish king about the period in question desired to adopt a heremetical life, he would have found a retreat among his own countrymen on this border of the Roman territory.

In the passage in which Mac Firbis describes the process of making the dead king appear to breathe smoke and fire against his enemies, he repeats the above observation about the "learned."

This double version of the means of Dathi's death may give rise to a suspicion that the lightning-flash is an incident borrowed from the story of the Hun, and that the Irish legend is built up of material drawn partly from Byzantine history and partly from the mediæval thaumaturgists. But I fancy anyone acquainted with the characteristics of that kind of Irish literature will regard this introduction of the "arrow" which slew Niall as one of the common affectations of senachism, and easily separable from the less puerile incidents of the story.

The fable of their Trojan descent, in which the Franks only imitated the Latins and Britons, may have had its origin in the presence of the name Priam, father of Marcomir, in the pedigree of their kings. This Marcomir, who spent the latter part of his life in captivity in Tuscany, was father of a son called Pharamond. Pharamond has had the ill-fortune to be regarded by many historical critics as a mythical personage, on singularly slight grounds. He is mentioned by Prosper, a cotemporary, as reigning in France in A.D. 420. There was no France then, properly so called; but the name France is shown on the Peutinger map, as designating a country east of the Lower Rhine, which not impossibly may have been Pharamond's kingdom. No record, however, has been preserved, of the time or manner of his death, and tradition assigns him different and inconsistent places of sepulture.<sup>46</sup> The result has been that Pharamond's ex-

<sup>44</sup> Franci, origine Trojani, post eversionem Trojæ, Priamo quodam duce, inde digressi, juxta Thraciam super ripas Danubii consederunt, edificantesque ibi civitatem vocabant eam Sicambriam. Mansueruntque ibi usque ad tempora Valentiniani imperatoris, a quo inde expulsi. . . . Maccommiro, Sunnione, et Genebraudo ducibus, venerunt et habitaverunt circa ripas Reni in confinio Germaniæ et Alemanniæ. Quos cum multis post modum idem Valentinianus præliis attemptasset, nec vincere potuisset, propriè eos nomine Francos quasi ferancos, ad est feroces, appellavit. *Rad. de Diceto Abbreviat.*, ad an. 392. From *Hugo de S. Victor Excerptiones P. Priores*, l. x., c. 1.

<sup>45</sup> Under the Emperor Probus.

<sup>46</sup> Stephen Byzant., *φραγγοι*.

<sup>47</sup> The chartularies of S. Gall abound in Frankish names; see also the *Vocabularium Teutonicum* preserved there.

<sup>48</sup> Vita Pirminii.

<sup>49</sup> Chifflet (*Anastasis Childerici Regis*) has it from the Brussels ms. that he is

istence as king of the Franks in France is strenuously denied, and, in any other character, is gravely doubted by the majority of French historians. Their judgment in this respect seems to carry criticism to an excess of caution. What gives it its principal countenance is the circumstance that history makes no mention of Pharamond on the occasion of Aetius's expulsion of the Franks from Gaul in A.D. 428.<sup>41</sup> When it is considered that this same year is that at which Prosper chronicles the accession of Clodio, Pharamond's successor, and is also that in which the Irish story brings Dathi to the tower of the royal anchorite, who had abjured his kingdom to lead a religious life in the Alps, the reflection will probably arise that if the writer of that story by his Formenus meant the king of the Franks, the circumstance of Pharamond's non-appearance as an opponent of Aetius on that occasion would be not unsatisfactorily accounted for.

Here I leave this curious inquiry, professing only to have shown grounds for believing that the writer of the glosses in *Lebor na h'Uidhre* intended his readers to understand that such an expedition had been led by Dathi as far as St. Perminsberg, and that his followers, after his death, effected their retreat through the places in that neighbourhood which have been enumerated.

#### NOTE ADDED IN THE PRESS.

Since reading the above Paper, the writer learns from the Rev. Pfarrer C. Ricklin, Wallenstadt, that *Farnor* and *Lunden* are two places in that neighbourhood; the first lying in the direction of Quinten, on the north side of the lake; the second near Mols. The case, therefore, would appear at present to stand thus. The gloss to *Uidhre* gives the names:—

|                          |   |   |   |   |   |
|--------------------------|---|---|---|---|---|
| Corpar,                  | . | . | . | (not recognized).                       |   |
| Cinni or Cingi,          | . | . | . | possibly (P) the present <i>Wangs</i> , | east of Wallenstadt.  |
| Fale,                    | . | . | . | "                                       | " <i>Wallenstad</i> , locally <i>Wale-</i><br>(stad or stadt).    |
| Miscal,                  | . | . | . | (not recognized).                       |   |
| Larrand,                 | . | . | . | apparently the present                  | Glarus, formerly <i>Clarona</i> .                                 |
| Corde (elsewhere Corte), | . | . | . | "                                       | " <i>Quarten</i> , on south shore of<br>Lake Wallenstadt.         |
| Moli,                    | . | . | . | "                                       | " <i>Mols</i> , east, or <i>Mollis</i> , west,<br>of Quarten.     |
| Grenis,                  | . | . | . | "                                       | " <i>Grinau</i> , at head of Lake of<br>Zurich.                   |
| Farnar,                  | . | . | . | "                                       | " <i>Farnor</i> , west of Wallenstadt,<br>on north shore of Lake. |

buried outside of Rheims; Mabillon (*Acad. des Inscript.*, 11; 688), citing Humboldt in Trithemius, makes his sepulchre at Farramont in the Vosges.

<sup>41</sup> On this slight foundation Moreri (Pharamond) infers very confidently that "if the Franks had a king of that name, it is certain (*il est sûr*) that he was already dead when Aetius undertook this war." Usher, failing his conjecture that Pharamond and Theodemir were one and the same person, concludes that he must have been slain in this campaign. These are arbitrary ways of reconciling the elements of history.

Besides these, other accounts mention—

Colum, . . . possibly, (?) the present *Flums*, east of Wallenstad.  
Lundun, . . . apparently *Lunden*, between Mols and Quarten.

All being in one neighbourhood, on the route hither from St. Perminsberg, where the gloss appears to fix the site of Firminus's cell and the death of Dathi.

The circumstances of Dathi's death are still vividly preserved in the tradition of the country. The pillar-stone supposed to mark his grave stands near Cruachan, in the county of Roscommon, on the estate of Mr. French, D.L., of Clooneyquin, who writes as follows:—

“ February 15th, 1882.

“ The place where Dathi is said to have been buried, near the *Relig-na-rec*, was a portion of our old ancestral estate, and I remember, when a boy, I was often told that a king of Connaught was buried there who had been killed by lightning at the foot of the Alps. I was told by the late Fitzstephen French, M.P., that they [Dathi's troops] were said to have placed the dead body on his horse, and fastened on his helmet a sponge saturated with some inflammable liquid, which struck terror by night into the hearts of his enemies.”

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XXXIII.—ADDRESS DELIVERED BEFORE THE ACADEMY. By SIR SAMUEL  
FERGUSON, LL.D., Q.C., President.

[Read, 30th November, 1882.]

I AM very grateful for the honour you have done me in electing me to your Chair in succession to Sir Robert Kane. An old Irish bishop, writing of a predecessor, has said—

“ I wish that I, succeeding him in place  
As bishop, had an equal share of grace.”<sup>1</sup>

So I may say I wish that I, succeeding Sir Robert Kane as President of this Academy, may be endowed with an equal share of wisdom. An equal share of knowledge I hardly hope to attain to.

Your choice of me, however, on this occasion, invites to subjects more important than personal considerations. My views regarding the inexpediency of organic changes in the constitution of the Academy have been so well known, that I feel warranted in accepting your election of me as evidence that the Academy does not desire the encyclopædiac character of its constitution to be disturbed. The Academy was incorporated almost a hundred years ago for the promotion of Science, Polite Literature, and Antiquities. Down to 1870 its Council of twenty-one was divided into three Committees, of seven each, representing the three pursuits respectively. In that year, on the representation of some Members who took notice that Polite Literature had almost ceased to be cultivated, and that the pursuit of Science was daily becoming more important and popular, a change was agreed to, by which the tripartite division of Council was abolished, and a dual constitution substituted—one Committee of ten Members, instead of the former fourteen, representing Polite Literature and Antiquities; and the other, of eleven Members, in lieu of the former seven, representing Science:—a seasonable and beneficial change, in which none concurred more frankly than the Members of the non-Scientific Committees. This concession, however, did not satisfy. There remained a desire to push the process of re-organization into the constitution of the Academy itself. But these views did not, here, meet with encouragement. The consequence was a certain degree of estrangement, and the promulgation of a project for the establishment of a Royal Society for Ireland, designed, I do not doubt, in the supposed interests of Science, but which, in my judgment, and I think I may say in yours, by disuniting, would dissipate and weaken our intellectual resources, even if it did not involve an injurious reaction on the chartered rights of the Academy. Your

<sup>1</sup> “Huic ego succedens, utinam tam sanctus ut ille.”—*Epitaph of Milor Magrath, Cashel.*



Council has not been unwatchful, and has had at least the assurance that notice shall be given it of any proposal, in that direction, being submitted to the Government. No notice has been received so far; but no assurance, neither, that such proposals may not at any time be made. In this state of uncertainty, it is well to know that it has not been the practice of the Crown to derogate from its grants, unless where it is shown that change is required in the public interest, owing to some defect in the practical working of the Body whose charter it may be proposed to invade, and that the *onus* of showing such defect lies on the objectors. The only defect I have ever heard alleged against the organization of the Academy is, that a reader of a scientific Paper sometimes finds antiquaries among his audience, which, I fancy, can do Science no harm, and may do Archæology some good.

The disquieting rumours incident to this project have not prevented the Academy from prosecuting all its objects with signal industry. In Science, especially, the number and variety of the Papers read at our Meetings show a great and continuing increase. An estimate of the growth of this revived activity amongst us may be formed from the fact that, whereas up to 1871 it took twelve years for the production of one volume—the twenty-fourth—of our Scientific Transactions, the next volume was completed in 1875, the next in 1879, while that which is now current will probably be completed in 1883.

I am not competent to pronounce whether, or how far, the matter of these later volumes, in its scientific value, exceeds or falls short of that of our earlier Transactions; but I have not been an inattentive listener, and I have observed that the Papers read have, I think, without exception, professed either to extend the bounds of existing knowledge, or to furnish more compendious processes for its attainment; and, further, that they all have been confined to that province of Science in which every conclusion may be vouched by the certainty either of mathematical or experimental demonstration, or of widely-extended observation of external things. These are the excursions into the Unknown or the partially Known which justify the existence of Societies like this Academy. They supplement and extend the stock of knowledge communicated by our Universities and teaching Institutions. Their results, as they take shape, assimilate with the teaching of the future, and add to the supply of those theoretic instruments with which Practice and Invention work in ease of labour, in increasing the goods, and diminishing the evils, of human existence. The process may be slow, and the steps, as taken, hardly noticeable, but the resulting combinations make themselves felt in the constantly increasing force of civilization. In proportion as such societies accomplish these ends, they rightfully claim the aid of enlightened governments in supporting suitable establishments for their meeting halls, libraries, and museums; and, even more essential than these, in guaranteeing to them that sense of corporate pre-

eminence, security, and permanence, without which an Academic spirit can no more subsist than military virtue in a concourse of undisciplined men.

Outside the province of Demonstrative Science—for I do not intrude at all on the Moral Sciences resting on Authority—lies a vast and continually widening field of scientific speculation, concerning itself with the more complex elements of the human mind and affections; which, though equally open to our cultivation, the Academy has but rarely, and to a cautious extent, entered upon; for, once the line of demonstration from mathematical or tangible tests is passed, although the formal apparatus of Science may be present, certainty begins to merge in probability, in analogy, and opinion. It seems, indeed, to be one of the conditions of human knowledge, where it does not rest on Authority, that, in proportion as its subjects become more intimate to man, their scientific treatment becomes less certain. Philosophical inquiry into the higher functions of our nature, and the moral and social crystallizations to which they give rise, may proceed by ostensibly scientific methods of definition and axiom; but, seeing that we can take out of a definition no more than we put into it, the results must still depend on the inquirer's own breadth of view and accuracy of generalization; and, considering the many circumstances which may modify these, it seems to me that the Academy has acted wisely in leaving that class of subjects to the Chairs and *Sorinis* of Learning elsewhere. It is precisely at this point, however, that what I have ventured to present as an ascending series, rising higher from its base, and becoming less distinct as it rises, appears to some great minds—of which it becomes me to speak with the utmost respect—to be but the circle of knowledge returning on itself, and amenable to a physical scientific cognizance all round. In the absence of Authority, I can only say, for my own part, that at one end I see Intuitive Certainty, and at the other Inference and Argument; and confess my inability to understand how the circle can ever be completed by welding the hot and cold metal of these extremes together.

In the wide field I have referred to, in which Science may be said to prosecute the search after Truth, with Opinion for its yokefellow, my subject leads me to particularize one speculative inquiry—not the least interesting or delightful of its class—the theory, namely, of Beauty in the Fine Arts. This until lately was a special province of our old, honoured Sister Institution, the Royal Dublin Society. Now that Science, as conducing especially to Art and Manufacture, has been taken up as a branch of the Public Service, it is commonly supposed that the great Government Department charged with public instruction in these important affairs of life necessarily supplants the Society in this function. But those who take this view overlook the distinction that the South Kensington Establishment is altogether a teaching Institution; whereas the Royal Dublin Society, like this Academy, is, although in a more utilitarian sense, an Investigating

and Philosophic Body, capable of rendering like services to South Kensington as the Academy claims to render to the Universities, by carrying forward what were the last results of class-room instruction into individual investigation and discovery to be re-contributed to the former stock of teaching capacity. The possibility of a splendid future is open to that Society, standing, as it does, in the front of the march of imperial intelligence, and capable, if it will, of giving increased vitality and even direction to its forces. That any distrust of the aims of a Body so well deserving in its past services, and having before it a field of usefulness so wide and honourable, should have existed, and should still require to be allayed, speaks ill for their capacity of dealing with the intellectual forces of a people who have suffered such results to grow out of their administration.

The Department, however, will, without doubt, afford the best instruction that can be given in scientific aid of the Industrial Arts, and in this its operations will have the grateful suffrages of all classes. But the domain of Taste—whether artistic, architectural, or æsthetic—is a free field, in which teaching *ex cathedra* carries no more authority than the critical judgments of individual refinement; and we will still look to our educated classes at large, and particularly to the Members of the Royal Dublin Society, not only to aid in the promotion of every Useful Art, but to contribute the influences of independent taste in the Fine Arts towards the general amenities of our city and country. The true schools of the Fine Arts in all countries have been the abodes of individual men of genius, sustained by the presence of a rich and splendid society. Whether we shall ever again possess such a class of patrons as called forth the artistic and architectural excellence of the last century no one can foresee; but it needs no prevision to perceive that genius, although a class-room may bring it into notice, is not a thing that can be taught.

There seems indeed something incongruous in the authors of the architectural works hitherto produced under the auspices of the Department being charged with the instruction in Taste of the possessors of such structures as Leinster House, the City Hall, and the Bank of Ireland. But whatever may be thought of the buildings in which the London collections are deposited, no one of ordinary intelligence can view their contents without some enlargement of ideas and a great deal of enjoyment. Few observers, indeed, whatever their capacity, can move through the objects assembled in the new Natural History Museum without experiencing an almost religious sense of awe and wonder, and possibly, also, of responsibility for the faculties which have placed man at the head of so astonishing a creation. The Department is about to provide a Museum of similar collections here. If its exterior be worthy of its neighbourhood, it will form an elegant and dignified feature in our city. If its collections be but approximately as instructive as those of the great London Institutions, our Irish public cannot but benefit from observation and

study among such examples of the mighty and beautiful works of God and of man.

One gallery at least of the Museum, when it shall at length be established amongst us, will be amazingly rich and interesting to the Irish people—that, namely, which will contain the collection of Celtic antiquities now here in the Academy House. Under pressure of an intimation that our annual Parliamentary grant depended on our contributing this collection, to form the nucleus of the local National Museum, the Academy yielded to the demand of her Majesty's Government that we should hand it over to the State in trust for the Irish public; and, as soon as a suitable place of deposit in the proposed Building shall be provided, it will, *uberrimâ fide*, carry out its engagement. But it did refuse another demand pressed upon it at the same time, that it should so far become a branch of the South Kensington Establishment as to apply for its Parliamentary grant and vouch its expenditure through that Institution; and adhering at all risks to that refusal, it had the satisfaction to witness the withdrawal of the Government's demand, which all subsequent experience has shown was rightly and wisely abandoned. What we have acquired while supported by public subsidies we hold in ultimate trust for the State; but our organization has hitherto been, and I trust will always continue to be, that of an independent, self-governed Corporation, carrying on work of voluntary investigation, with which Teaching Institutions, as such, have nothing to do, beyond adopting from time to time such additions to their formulas of instruction as those investigations may happily lead up to. The Academy depends for its annual grant on the liberality of Parliament, the constitutional guardian of the public purse, moved by the recommendation of the Queen's Government of the day. At the time of the Union, its aid in the promotion of social intelligence and refinement was deemed worth an annual acknowledgment of about £160. Its increased activity, and, presumably, the increased value of its services to Science and Literature, have been so far recognized by successive Administrations and by the Imperial Parliament that, for many years back, besides being provided with this excellent house, it receives an annual grant amounting to £2000; not excessive as compared with the necessary wants of an Institution prosecuting so many undertakings and maintaining such an establishment; but far from penurious or unhandsome. The Academy, indeed, has always found the Queen's Government ready to give a favourable consideration to its wants where these have been for clearly-defined and realizable purposes of utility. At the present moment it is even in advance of our ability to give employment to its bounty. But rare learning, if we would profit by it, must be allowed its own leisure; and although the *Annals of Ulster* have been called for with some impatience, whatever delay has occurred has been in the interests of historical knowledge. For it ought to be known that the text and translation of these *Annals* down to the time of the Conquest are already published; and that what we wait for are

the notes and critical comments which no man living can give us, but one.

In transferring our antiquarian collections, we have the satisfaction of knowing that we aid a great and, I trust, a very useful public object by a splendid contribution; and, further, that we repay the advances of the State to the extent of above two thousand pounds of our private moneys from time to time sunk in the purchase and cataloguing of the objects themselves. The nucleus of our Museum was formed, by voluntary donations and purchases out of our own income, before we left our old residence in Grafton-street. The first large accession was purchased in 1840-2 from the representatives of the late Very Rev. Dr. Dawson, Dean of St. Patrick's, for a sum of upwards of one thousand pounds, altogether subscribed by ourselves and our friends. The Cross of Cong, purchased for one hundred pounds, was the donation of a Member. The Tara torques were bought for one hundred and ninety pounds, subscribed by ourselves. So was the Domnach Argid, for upwards of two hundred pounds, raised in the same way. Our books contain the detail of ten other subscriptions amongst Members to purchase particular objects now destined for the State Museum. The whole price at which the collection has been acquired may be computed at between five and six thousand pounds. The mere material in gold and silver is intrinsically worth more than two thousand four hundred pounds. To estimate the artistic and historic value of the collection would be impossible. But celebrated and acknowledged, as it is, for the finest collection of its kind in existence, were it put up to auction to be bid for by the rival governments and collectors of Europe and America, no one would be surprised should it sell for ten times its cost price; and if that at all approach the measure of its value, the Academy, in transferring it to the State, will go far to recoup the whole amount of all the subsidies it has received from Parliament, amounting in the entire to little more than sixty thousand pounds, during the ninety-six years of its existence.

The credit of having accumulated it rests with Council and with successive Committees, backed by the ever-ready liberality of the Academy and its friends. The late Sir William Wilde was one of the most energetic of its promoters. He gave the gratuitous labour of years to its arrangement and cataloguing. If, when it goes to its new place of deposit, a bust of Wilde could be procured, to accompany it with the bust which we already possess of its chief founder, Petrie, it would be a gratification to those who witnessed his labours, and some small acknowledgment of the debt which his country owes him for services rewarded hitherto only by the memory of their value preserved among his old colleagues, and vaguely recognized by the public.

It has been stated in an *Archæological Journal* of authority that, since Sir William Wilde's death, the antiquarian collections here have fallen back into the chaos from which he rescued them. I give the

most express denial to that statement. In the transfer and new deposit of our Museum which has been made since it ceased to benefit by Sir William Wilde's services, his arrangement, so far as it had gone, was piously preserved; every object he had recorded was identified with its place in the Catalogue and in the old Registers, and keys connecting the new and old places of deposit were made out with the utmost particularity for them all. Since then there have come into the house upwards of four thousand objects, every one of which at the time of its acquisition has been entered in the new Register, with particulars of place and circumstances of finding, wherever these could be ascertained; and for all objects which may come in, pending the transfer, like entries will be continued. If the Department should desire to prepare, for its own information, an authentic account of the commencement and progress of the Collection up to the time of transfer, I do not doubt that the Council will willingly give access to the Minute-books and documents from which the facts may be obtained.

Another part of the arrangement contemplated at the time of the Academy assenting to the transfer of its Museum was, that it should change its abode to Leinster House, where suitable apartments should be provided for it. We have, at all times since our foundation, been provided by the State with a house—first, in our old residence in Grafton-street; afterwards, in the fine old mansion, altered and enlarged for our purposes, in which we are now assembled. Speaking for myself, I own that the prospect of that arrangement being altered to a kind of tenemental occupation, even in a much superior building, is not a pleasing one. The Royal Dublin Society will always, I trust, be a body of sufficient numbers and consideration to occupy to advantage so much of its old palace as may not be required for Departmental purposes; and I think I express the general feeling of the Academy in saying that, while we wish the Sister Society the fullest enjoyment of that honourable position, we desire on our own part to remain self-contained in our lodgings, as we mean to keep ourselves independent in our pursuits. Should this prove to be the sense of the Academy when the time shall come for carrying out all the terms of our compact, we will have strengthened our claim to the most favourable consideration of Government for any wishes we may then entertain, by services still further enhancing the value of what we contribute.

There have been great delays in providing the intended Museum Building; and further delay is likely to arise from what seems, at the present moment, to be a miscarriage in the design. Certainly it has not been by reason of want of time that your Council and the Board of Visitors have remained to so great an extent unconsulted. Had either Body been taken into the confidence of the Department to the extent of inviting its views as to space and lighting, the possible miscarriage, which is likely to leave our Collections here for some time longer, could hardly have taken place. It appears to have

arisen from an improvident allocation of a part of the ground at the disposal of the Department, which could not be made to yield the extent of area required, save by the sacrifice, more or less, of equally requisite light. If the matter be re-opened, I earnestly hope that the Lord President of the Council, who is also, in his Excellency's exalted capacity of Viceroy, our Visitor, will see that your Council and the Board of Visitors, on which Sir Robert Kane and the Provost of Trinity College, with myself, represent you, shall have an opportunity of stating their views, to be considered by the Department before giving their next instructions for the guidance of the Architect.

We desire that the new Museum may be entirely successful. We wish well to all the operations of the Department, and welcome its officers amongst us. The presence of a number of gentlemen of the ability and accomplishment adequate to imparting knowledge so varied and valuable is a solid advantage both to the Academy and to the Royal Dublin Society; and it needs but the observance of that consideration due by public servants to Public Bodies, to ensure a co-operation from us not only sincere but cordial

Not very many years ago, a glance at the progress of Science within the Academy, and a statement of our position as regards our antiquarian Collections, would have nearly exhausted all that a Presidential Address, not aiming at anything beyond our immediate affairs and prospects, could properly bring before you. For Polite Literature did not, by any means, at that time, occupy the large space it now does in our Proceedings. After the time of Dr. Todd, indeed, the work of carrying forward a purely literary and scholastic exploration of Irish historical and antiquarian sources devolved mainly on one man, who has been to us at once our Camden and our Usher—it is no disparagement to either great name to make the application. The Academy will readily understand that I speak of the Very Rev. Dr. William Reeves. In his contributions to Irish learning in our *Transactions* we have, laid up for the delight and instruction of scholars, an immense store of information, solid, accurate, scrupulously vouched, all conveyed with a grace and engaging directness unsurpassed by any other cultivator of those fields of knowledge, here or elsewhere. But the growth of philological study, and the labours of Zeuss in collecting from the Irish material of the Continental libraries the elements of a vocabulary and grammar of the ancient language, had given a new value to our old Irish Books and a corresponding stimulus to Academic enterprise. For I cannot employ a better word in describing the immense labour about that time entered on by the Council, in commencing the transcription in *fac simile* of our most ancient Irish manuscripts, and so placing them at once at the disposal of Continental scholars. So great and so successful has our progress been in this vast work, that Mr. Gilbert, its most active originator, may justly be awarded a large share of the honour and thanks due to your Council and to the successive Committees by whom the transcription has been carried forward. Our Scribe, the last of an hereditary class, lived to

complete in this manner the reproduction of the text of the Books of Uidhre, Breac, and Leinster—the last, the property of Trinity College, which noble Institution shared with us the expense of the transcription and publication. It has been edited by our colleague, Dr. Atkinson, whose prefatory survey of the contents reveals the greatest storehouse of middle-age Irish literature yet thrown open to scholars. Since the death of Mr. O'Longan we have been obliged to abandon the pen *fac simile*, and resort to the slower and more difficult process of photography, for the smoke-darkened and much-thumbed vellum of the Book of Ballymote, which we hope may be completed in about three years. The vellum of the Book of Lecan is comparatively clean, and we may look for its reproduction in a shorter time. Others no doubt will follow; and it is not an over-sanguine forecast that, within the next ten years, the whole bulk of the old native Irish literature will be in the hands of scholars all over the world.

But without an adequate Dictionary the progress of students in our Middle Irish material must be almost as slow and laborious as we may imagine Zeuss's to have been when he first began the interpretation of his glosses. There are at the present time but a very few men—their names might be numbered almost on the fingers of one hand—to whom the older texts are plenary intelligible; and that, in every instance, only by the help of vocabularies of their own compiling. The Dictionaries we have are more unsuited for these texts than Johnson would be for Chaucer. If the word sought for should happen to be there—a rare contingency—it will, in most cases, be found disguised under an artificial spelling of its first syllable, according to a rule of what may be called “vocalic balance,” devised since the language became confined to a section of the populace, and in their mouths underwent that process of structural degradation which makes the spoken Irish of the present day so ill-defined and slippery in its fluency. Whether and to what extent the Dictionary we require shall follow these Protean vocalisms, or shall give the words of our vellum manuscripts in their original forms, will be a question for the Editor to whose hands the preparation of material for the work has been confided by Council. A large mass of such material has already been accumulated. Windisch at Leipzig, and Zimmer at Berlin, have given their aid abroad. At home, the contributions of Dr. Whitley Stokes, whether in our *Transactions* or elsewhere, besides supplying examples of perfect English employed in racy and characteristic translation, are all enriched with glossaries available for the compilation. Every Todd lecture delivered here by Professor Hennessy contributes supplies of the same kind. Under the direction of the Secretary of Council, a process has for a considerable time been in operation of extracting every leading word in the old texts hitherto published, with enough of its context to verify its several meanings—a great undertaking, but not disproportionate to the larger objects we may reasonably hope to attain to through its instrumentality. Where we now have a few students, painfully making their way through the *fac similes*, with



the illusory and disappointing incumbrance, rather than aid, of our present Dictionaries, we may reasonably expect that then we shall have numerous scholars in all the chief seats of letters eager in the exploration of things as new, at least, in literature as were the contributions of the cloisters at the revival of learning. Fragments of Continental song and tradition may still remain unpublished in obscure repositories; but all the solid literary documents of every country of Europe have been for centuries collected, annotated, and put to the uses of philosophic thought, save only those of Ireland. What had been done for us in this direction, up to the time of our entering on our present Academic enterprise, was mainly the work of individuals. The name of Richard, second Duke of Buckingham, at whose expense O'Connor published his "*Rerum Hibernicarum Scriptores Veteres*," ought always to be regarded with affectionate gratitude by the Irish people. O'Donovan and Curry had added to it vast stores of exposition, and many selected examples of new material; but this undertaking of the Academy is the first systematic and comprehensive exploration of the whole field.

We cannot predict what may be the next surprise in Science. The Columbus of physical philosophy are out on every sea, and may any day come in sight of new continents of knowledge; though it is denied to us to foresee in what arc of the horizon these may present themselves. We may, with more confidence, indulge an expectation of some results likely to follow from the Academy's Irish contributions to the European library, when they shall be completed. Among the first of these, I imagine, will be an accession of critical material for the illustration of classical and mediæval literature, drawing with it not impossibly supplemental additions to Du Cange. I fancy if anyone, moderately well read in what we possess already, were to take up a good digest of the manners and customs of the ancients—let us say the "*Geniales Dies*" of Alexander ab Alexandro, one of the most agreeable companions of a thoughtful leisure—he would not fail to find many unexpected analogies and elucidations. The old Geography of the British Islands would also, I think, catch more than a passing beam from the new light. Perhaps, also, a nearer view of the obscure roots of old German and Scandinavian literature may be looked for in these insular offshoots from the common stem. To say that lost Classics may be recovered would be too sanguine a surmise; but it is certain that one of the latest of Dr. Whitley Stokes's versions of matter put before him by the Academy shows either a use of now unknown sources or a singularly daring and not probable reliance on mere invention; and there seems reason to expect that the copious tracts on Alexander the Great contained in *Leabhar Breac* may be found to some extent of the same character. What light may be thrown on general Continental literature in later than mediæval times may be judged of by the instructive example of Mr. Hennessy's publication of the old tract from that volume, the *Vision of Mac Conglindé*. We all know the peculiar style which characterizes the school of Rabelais.

But, the Rabelaisic style, was it a creation of the witty Breton, or derived from elder humourists? That it had some Celtic connexion was a current opinion; and that the Arthurian Cycle and an infusion of the Celtic taste had been carried into Italy before the date of its supposed likeliest prototype, the *Morgante Maggiore* of Pulci, appears sufficiently clear. But there the history of the Italian literary *renaissance* leaves the inquiry; and so the subject rested up to the time of Mr. Hennessy's publication. The *Vision of Mac Conglinde* purports to deal with an amusing adventure which befell a personage named in Irish annals of the eighth century. Its language and internal evidence refer it, not improbably, to the ninth or tenth; and it is, in spirit and in form—in everything, indeed, but indecency, from which it is free—a most absolute Rabelaisic performance, by many centuries older than any other composition of the same school known to literary investigation.

But, unless the diffusion of these new materials result in something more solid and socially influential than pure criticism, the object which has animated so many minds in accumulating and preserving them will be but imperfectly attained. For, if there ever was a legitimate patriotic hope at the bottom of scholastic effort, it animated the men who brought these things together and put them in their present posture and capacity for use. That this country should be without an adequate History and without a characteristic Literature rising above the conventional Irish buffooneries, has been a source of pain and humiliation to educated Irishmen for generations; and it is to the stimulus of that reflection, not less than to the love of letters for their own sake, that we owe what we have accomplished, and the prospect of all that we yet may achieve. So far as concerns a general History of the country, we must, probably, be content to let the work for the present rest in preparation and material. If the time had arrived when Ireland could be said to have taken one or other definite position, from which her past could be contemplated in distinct, unshifting perspective, we might be more impatient of delay. But it seems to me that no great History of any country has ever been written from any but a fixed point of contemplation, not attainable in transitional times, such as ours for so great a length of time unhappily have been. Essays, having much of the solidity and dignity of history, may be framed in this view and in that, according to the point the writer would desire to see become the fixed one; but till some pause in the ever-oscillating course of our destiny shall take place, a philosophic retrospect, on a large scale, of Irish affairs is hardly to be looked for. It is true, the history of even the most fortunate countries must be a record of flux and reflux, but the season in which the Historian achieves his work is, I fancy, at high tide.

Our historic material prior to the Conquest, if we except a few tracts of positive and solid character, is of two kinds, each widely differing from the other. There is a great mass of bardic matter, vague, diffuse, and rhetorical, which, though it indicates the tone and colour

that ought to pervade the composition, affords but a slender handle for orderly investigation. On the other hand, we have an almost equal amount of annalistic matter, exact, certain, and reliable, but concerned in events too minute and disconnected to afford enlarged historic generalizations. Such as it is, however, in the hands of a philosophic observer there can be no doubt of its capacity for yielding a general prospect that even now might be entertaining and not uninteresting.

For the post-Plantagenet times great accessions have been contributed by the Record Publications of the Master of the Rolls in England, by the Record Office here, and by the Historic Manuscripts Commission. We will, I think, deceive ourselves if we imagine any very great store of high historic material for this period to remain unpublished. Copious essays might now be written, in addition to those we already have, on the chief epochs and turning-points of the Irish post-Conquest story. The times of the Hiberno-Norman lords Palatine, with their several semi-regal Chanceries, Courts, and Establishments, would supply one fruitful subject; the invasion of Bruce and its Hibernicising effects, another; the reaction of the Ulster and other Plantations, a third: but, to combine in one consistent prospect the overthrow, the recuperation, and the ultimate fusion, or counter process of absorption, as the case may be, of the old Irish race, involves, I think, the necessity of waiting through an indefinite time, till some one permanent result shall give the historian a definite base for his survey.

From the contributions, however, which we can make to general Polite Literature, we may expect something in the nearer future. We can contribute a material barbaric, it is true, but as magnificent and as fresh as was the story of the house of Atreus when it first came into the hands of the Greek poets and tragedians. Older and ruder, though in one sense less coarse, than the Niebelungen Lay, it may effect for the literature of our day what the Lay and its associate school of song has done for Germany. The highest geniuses—epic, dramatic, musical—have always sought for something from earlier sources on which to hang their first conceptions. Such aids, at the present day, are hard to be found among the much-triturated elements of English literature. We are not in a position to despise any accessions of that kind from any quarter, and, after having collected all that can be gathered from abroad, ought to rejoice at the prospect of being able to turn with unexpected relish to something capable of being supplied at home. It is no answer to say, these offerings contain much that is intrinsically jejune, or ugly, or barbarous. The origins of the best Classic literature lie among matter as crude—I might even say as revolting—as anything in old Irish or old Welsh story. Mere raw material, however, to be converted to the uses of cultivated genius, is not all we may reasonably hope for from such sources. There are ways of looking at things, and even of expressing thought, in these deposits of old experience not to be lightly rejected by a

generation whose minds are restless with unsatisfied speculation, and the very clothing of whose ideas begins to show the polish of thread-bareness as much as of culture.

But although some of the finest intelligences of our day have been attracted to this field, and still hover about it, the subject does not commend itself to acceptance in literary centres. A man whose education has been completed at a University does not care to learn a new language and a new Classical Dictionary with a view merely to the expression of critical opinion for an audience at present but limited in number and probably better read in the subject than he is. To illustrate what I mean, let me revert to the *Vision of Mac Conglinde*. Although published in a widely-read organ of taste and information, it never, so far as I know, received the slightest notice in any work of criticism, or Chair of Letters in any of our Universities; and the origin of the Rabelaisic school of humour continues, I believe, to be authoritatively referred, as before, to the Italian *renaissance*. It would appear, indeed, as if, as regards the Irish subject at large, there exists in the minds of the leading directors of intellectual opinion a mingled feeling of arrogance and apprehension, strongly obstructive to the admission of this kind of literary reinforcement. The arrogance is, no doubt, bred of an habitual vilipending of things Irish, which we here lament and deprecate, but do not wonder at; the apprehension may arise from a variety of considerations not properly examinable from this Chair or on this occasion, but may, at least, be deemed unphilosophic in presence of the daily growth of what it will ultimately have to atone with and utilize.

Recent events have given to the older races in this country a considerable advancement in wealth and social status; and it cannot but be that the change will excite a desire for, as it will increase the means of procuring, a higher literature of their own. As regards the rest of the population, including the bulk of the upper and educated classes, if they do not count as many generations to their first settlers and *eponyms*, they are, at least as far as birth on Irish soil goes, most of them by many centuries more Irish than were the great-grandsons of Milesius—himself but the Strongbow of an earlier conquest. All of them have been here long enough to take root, and they have no intention of going out. They have imbibed, whether from social or from cosmical influences, an Irishism of their own, and assert their claim to a full participation in every honour that this country can confer on its children or they on it. They yield to none of their countrymen in the desire, and they greatly excel the bulk of them in the ability, to make Ireland once again a home of Arts and Letters. The works of this Academy can testify to what they have been able to achieve in that direction during nearly a century of patriotic endeavour. To their hands mainly has been committed the guardianship of the materials out of which such a literature as I have been contemplating may be evolved; and in their hands, mainly, the work of speeding that development now rests in this Academy. But all will depend on

the preliminary accomplishment of a sufficient Dictionary ; and if that work be completed during my occupation of this Chair, I shall retire from it with feelings of high self-gratulation at having been partaker in a labour which promises such an accession of honourable distinction to my country.

In carrying forward so many lines of exploration, on so many different levels, prosecuted as they are by so great a variety of methods, our chief difficulty is not so much the production of matter as the conversion of it to the current uses of learning : for our volumes, whether of Transactions, Proceedings, or Special Series, can only be issued at considerable intervals ; and we have no organ through which to notify our work at the time of its performance to the scientific and literary world. It is true authors of Papers receive a certain number of copies for their own distribution. But there is nothing more fastidious than the modesty of true learning. Men competent to the production of Papers of real value are quite above the arts of self-advertisement, even if there were not always some distrust of the value of matter so supplied to those who occupy the position of directors of contemporary thought. It cannot be expected that the gentlemen who are admitted at our Meetings as representing the Press, should possess the knowledge necessary for appreciating the great variety of subjects, more or less abstruse, considered here. Council, however, has adopted a rule which, if strictly acted on, may to some extent lessen this difficulty, and allow at least the readers of the Dublin journals to know something of the nature of the learned work going on amongst them—what it is about, and in what particulars it is that it proposes to advance knowledge. It is now our rule that leave to read a Paper will not be granted unless the complete manuscript, accompanied by an Abstract, be in the hands of the Secretary. These Abstracts, after the reading, are open to the inspection of visitors as well as Members, and ought to insure the Academy against apparent neglects which, I am sure, have arisen, not from unwillingness to aid us in our objects, but, I infer, from an inability, of which even well-educated men need not be ashamed, to follow the drift and catch the cardinal points of the Papers : for these, if worth anything, will always task intelligence to follow and appreciate.

Another instance in which the fastidiousness of learning embarrasses the work of the Academy, is the administration of the Cunningham Fund. Men of mature knowledge, animated by the true philosophic spirit of exploration, whose contributions alone are of any value to us, will not condescend to competitions on set subjects. A subject may be set and successful results had, where there is the assurance that someone, impelled by an unsolicited genius, has made it his voluntary study, and will not recoil from the idea of a pecuniary reward ; but such occasions rarely arise, and are not in harmony with the theory of competition. After nearly ninety years of unsuccessful endeavour to apply the Cunningham Fund as the donor had intended, we, about five years ago, sought relief from the Court of Chancery.

The modified scheme, accorded us on that application, allows the income of the fund to be applied partly in honorary rewards for work done, and partly in the old manner of offering premiums for prize essays on subjects prescribed. Accordingly, two years ago, a prize of one hundred pounds was offered for an Irish Classical Dictionary of the names of persons and places commemorated in published Irish sources. A more acceptable and entertaining work could hardly have been desired. Abundant material exists for its compilation; and there are not wanting scholars of adequate accomplishment for the task. But learning of the kind desired refused to come down into that kind of arena. We have had no competition, and the hundred pounds fall back into the Prize Essay Fund. It will be the duty of the Council to try some other subject in which, it may be hoped, knowledge may not exhibit so much coyness; but if it be found either that no competitors present themselves, or that such essays as may come in are merely made up *pro re nata*—as almost all competitive accomplishment is made up—this portion of the fund must go on accumulating until, at some future day, the Academy may find itself compelled again to ask for its application to purposes of real Academic usefulness; and Authority may at last recognize the fact that this Prize Essay Trust belongs to the class of cases which I might illustrate by supposing a bequest to light the city streets with oil lamps—a good and useful Charity a hundred years ago, but inapplicable to our present needs and means of illumination.

The Prize Questions have hitherto been left to the Literary side of the Academy. The Committee of Science has never proposed any, from a conviction—I believe the result of long experience—that this is a mistaken way of trying to promote scientific knowledge, and that original investigation in that field is just as little at the beck of pecuniary enticement as it is in Literature, Archæology, or Criticism. The Committee of Science, however, has imposed on it by the liberality—which, on the whole, may be deemed not unwise—of our Government, here as in Great Britain, the application of a fund, not awardable on competition, but bestowable by vote of the Academy, for aids in the promotion of Scientific Research. A scientific investigation may, at one stage of the inquiry, have need of extended observation, or of apparatus not at the command of any but rich men. The subjects at this stage are necessarily tentative, and there must be more or less of guess-work both in the applicant and the grantors. If the ultimate disappointments are more numerous than the successes, it is but what old experience might have led us to expect. But one success, really advancing useful knowledge, compensates for many failures. If challenged for our disposition of this Fund, we can say that, acting on the best advice our Committee of Science can give us, and proceeding in what seem the likeliest lines, we have not oftener been disappointed than others charged with the duty of like allocations elsewhere.

However stimulated—whether by little aids of this kind or by

the splendid rewards of commerce and monopoly, or by the unselfish solicitations of a pure love of knowledge, such as animates our efforts here—Science every day advances in useful discovery. Rich as we are in acquisitions of this kind, made during the present century, we may still look for further vast advantages over past generations in the enjoyment of all the arts and conveniences of life. Life itself seems visibly lengthened. Science, by the experimental study of the living tissue and of the atmosphere in which it exists, claims to have detected, and may ultimately intercept, the seeds of disease and untimely decay before they can reach their *niduses* of mischief in our bodies. Invention may aid Science any day in deriving mechanical power at first hand from the magnetic circulation of the earth or air. Knowledge of the laws which govern the fertility of the soil and the serenity of the atmosphere may conduce to make human life easier, and bring down the high price which man must pay for leave to live. Still, the

Audax omnia perpeti  
Gens humana

will remain the old sons of Adam, to whom the control of the elements, if they could attain it, would be as nothing in real value compared with the control of their own desires and passions; and for whose enlightenment in a higher wisdom than that of *Calculus* or *Quaternion*—in the wisdom which makes life happy and beautiful, even if it be laborious—Philosophy and History and Poetry have been softening manners and gladdening the hours of leisure ever since the boon of letters was first bestowed on mankind. With these companions Science walked accompanied in the Grove of Academus, and walks still so accompanied in many of the first Academies of Europe; and, if I have rightly divined your minds, I rejoice to believe that I am here as an exponent of your will that in the Royal Irish Academy they shall not be separated.

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XXXIV.—ON QUIN ABBEY. By THOMAS NEWENHAM DEANE, M.A.,  
R.H.A. (With Plate XIII.)

[Read, January 23, 1882.]

IN offering the following Notes on the Architecture of Irish Buildings, and Quin Abbey in particular, I trust the Academy will make allowance, not only for my shortcomings as an archæologist, but also for the cursory nature of my remarks with reference to particular buildings.

Many of you may not be aware that it is only since the passing of the Act which disestablished the Irish Church, that a fund was set aside for the maintenance of certain buildings, which otherwise would have been in a more derelict condition than before. At first these ruins numbered but eighteen; they have since been increased to one hundred and thirty-six, amongst which are some of the most interesting relics of antiquity in Ireland. It is even now a matter of regret that many others have not been included in the list, and that the movement so happily set on foot to rescue from ruin the faithful history of the past, as set forth in Ireland's ancient buildings, is curtailed both as regards funds and also other limitations.

The *modus operandi* with regard to repairs is as follows:—No contractor is employed; no palpable restoration is made; nothing is done to a building which involves speculation as to design; maintenance in the strictest sense of the word regulates the operations; earth and accumulated debris is excavated, affording in many instances most interesting results, not only as to the original plan of buildings, but also sure finds of cut stone connected with the building in question.

The study of a building under such circumstances is most interesting—its whole story told, its various phases of restoration laid bare, its vicissitudes of sorrow and prosperity set forth, and the changing customs of its occupants identified.

It would be useless in a short Paper like this to enter into the vexed questions of archæology. At the same time I would draw your attention to a few convictions which have been strongly forced upon my mind. First, I have little or no doubt of the Christian origin of the Round Towers. No one can examine the masonry of the Tower of Kilmacduagh, and compare it with the masonry of the end of the large church near to it, without coming to the conclusion that both are identical as to date, and are probably built by the same hands. I would draw attention to the Report of 1880, which lies on your table, showing a section of this Round Tower, and the very curious discovery of bones and other debris found within it.

I am also of opinion that the various styles of Gothic architecture, as developed in England, arrived later, and were practised longer in Ireland. Also, whereas we find Romanesque work as fine, if not finer,

than elsewhere, early English work and other styles do not display the same refinement as in England.

It is particularly interesting to follow the work of the several bands of workmen, which no doubt moved from place to place. At Clonmacnoise (as a starting point) we find the same hands working as at Kilmacduagh in O'Hyne's Church, Kilfinora, and at Corcumroe; and I feel sure that if the masons' marks were carefully compared the workers at Cashel could be traced to Hoar Abbey, Athassail, and many other places. In Waterford, again, we can trace the influence of the Welsh masons of Tintern Abbey—and thus from place to place may see how the ancient Freemasons carried on their work.

The antiquity of foundation of various buildings is also interesting. Few of those I have examined present homogeneity of style; amongst the debris of nearly all you find remains of twelfth century work and early English work down to very much later periods. The disregard and contempt of previous styles is as fully developed in Ireland as elsewhere; but I have observed—what is rare in England—a palpable imitation of an early style at a later period. Examine the arches and piers at Corcumroe with the iron character of the foliage in the capitals, and one can have little doubt that they have not the ring of the very early thirteenth century work.

The hardness of the mountain limestone, which is mainly used in Irish buildings, has curtailed to a great extent the elaboration of detail and floridness of style; but, on the other hand, it has led to a more careful study of proportion, and consequently there are few buildings in Ireland which have not a grace which many in England lack.

I can clearly trace four epochs of restoration—two in the Romanesque period, one in the thirteenth century, one in the fifteenth, and a partial one in the seventeenth.

The Romanesque changes are evidenced in Cormac's Chapel at Cashel, where it is clear the eastern end has been rebuilt; and I think I can show that it had originally an apsidal end. At Dysart O'Dea, Co. Clare, very early Romanesque work has been used in the same style at a later period. At Kilmakedar the remains of an apse are also to be traced, and the chancel is of a later date than the body of the church.

The thirteenth century work was generally distinct rebuilding.

The fifteenth century restoration consisted mainly in the addition of towers, transepts, and cloisters to the thirteenth century foundations.

The sixteenth and seventeenth century restorations are very partial, but yet distinctive in character.

Very few traces of pavements are to be found in the churches. Slates, in the real acceptance of the term, are unknown; but small, thin stones are used instead. Lead was very rarely used; stones overlapping each other formed the watercourses, and channels of cut stone took the place of what are usually termed flashings, where roofs abutted on towers or on other walls.

Towers were generally covered by gabled roofs.

Parapets were a fifteenth century invention. Almost all the thirteenth century roofs had eaves, and the triple battlements with overlapping stone gutters are entirely of fifteenth century origin.

The fifteenth century restoration was florid in its character, tracery taking the place of lancet windows. It also partook of a military character.

The sixteenth and seventeenth century restoration is characterized by the closing up of large windows, by filling them from the bottom, and curtailing them at the top; evidencing a dread of external violence, and also poverty, in the reduction of the size of glazed windows. Many of the naves of churches were converted into conventual buildings by the introduction of floors and fireplaces, the choirs alone being used for the services of the Church.

The west end of Cashel cathedral and Athassail, Co. Tipperary, are examples of semi-military abbeys. The latter (Athassail) is a splendid example. The abbey proper is of immense size and very pure thirteenth century work, and an Augustinian foundation. The nave is 117 feet long by 55 wide, inclusive of aisles; the choir 44 by 26 ft. 6 in. A lofty tower and transepts, the enceinte, gates, bridge, provision for portcullis, and other defences all remain, and also the wine-cellars. At a future time I hope to lay before the Academy drawings of this remarkable building, which, I am happy to say, will shortly come under our hands, and that the danger of its utter destruction, now so imminent, may be averted. It would be impossible in a short Paper, really intended to bring a particular abbey under notice, to trace the great interest attaching to the ruins of Ireland. It is a great pity so few measured drawings of them exist, and that their illustration is limited to the brief account given in the Annual Report of the Board of Works.

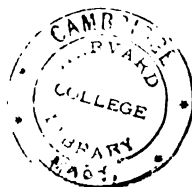
Quin, Quint, Quinchy (Plate XIII.), stands in the barony of Bunratty, five miles from Ennis. According to the "Monasticon," an abbey was founded here, A.D. 1278. The monastery of Quin was founded in 1402 for Franciscan friars, by Siodd Cam MacNamara, but Father Wadding places it 1350. In 1433 Pope Eugene IV. granted a license to MacNamara to place friars of strict observance in this monastery, and the same year, Macon Dale MacNamara erected this beautiful, strong building of black marble. Thus we find three dates—1278, 1350, and 1433. I have no doubt the eastern end, choir wall, northern wall of nave, and the western end belong to the first—1278. I should fix the transept and tower at 1433, but I cannot recognise any detail by which to fix 1350.

Edward I., Edward III., Henry VI.—The conventual buildings may in parts be later, but the main features of the building are as above. A glance at the plan will show you that outside the main walls of the abbey are the remains of a fortress, which for the moment we shall call Norman. The northern tower is in the best state of preservation; the curtain wall exists; the base of the southern tower

is there. The south wall of the choir of the 1278 church is the southern curtain wall. The entrance to the northern fortress through the curtain wall still exists under the fifteenth century tower, and the quoin of the eastern end of the thirteenth century church stands in the middle of the western tower of the fortress. The question is—Who built the fortress? It cannot have been built subsequently to 1278 or 1433. The Norman invasion (Henry II.) was in 1171. Can it be possible that so formidable a building, surrounded by a moat, earthworks, etc., could have been built and also razed within a century, without a note of its existence being extant? Discarding this idea as most improbable, we must look backwards to the time of Brian Borou, 1002, and come to the conclusion that the fortress of which we now find the remains in connexion with Quin Abbey was erected prior to the Norman Invasion, thus indicating a period of civilization anterior to 1711, in which military requirements were well known, and stone castles of an important character built.

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OF THE

ROYAL IRISH ACADEMY.

POLITE LITERATURE AND ANTIQUITIES.

SER. II., VOL. II.]

JANUARY, 1884.

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Part 10.—On some Deductions from M'Cullagh's Lectures on Rotation. By FRANCIS A. TABLETON, LL.D., F.T.C.D. [June, 1882.]

Part 11.—On Certain Definite Integrals. By JOHN C. MALET, Professor of Mathematics, Queen's College, Cork. [October, 1882.]

Part 12.—On the Embryology of the Mammalian Muscular System. No. I.—The Short Muscles of the Human Hand. By BERTRAM C. A. WINDLE, A.B., M.B., B.CH., and Senior Moderator in Natural Science, University of Dublin; Pathologist to the General Hospital, Birmingham. (With Plates III. and IV.) [January, 1883.]

Part 13.—Report on the Acanthology of the Desmosticha. (Part II.) By H. W. MACKINTOSH, M.A., M.R.I.A., Professor of Zoology, and Curator of the Museum of Anatomy and Zoology in the University of Dublin. (With Plates V. to VIII.) [June, 1883.]

Part 14.—Report on the Acanthology of the Desmosticha. (Part III.) Further observations on the Acanthology of the Diadematidæ. By H. W. MACKINTOSH, M.A., M.R.I.A., Professor of Zoology, and Curator of the Museum of Anatomy and Zoology in the University of Dublin. (With Plates IX. and X.) [July, 1883.]

XXXV.—ON SOME PASSAGES IN THE “*CONFESSIO*” OF ST. PATRICK.  
By SIR SAMUEL FERGUSON, Q. C., LL. D., President.

[Read, June 11, 1883.]

THE *Confessio* of St. Patrick, especially that copy of it preserved in the Book of Armagh, is justly considered the most authentic memorial of our great apostle. Some years ago, having occasion to examine the text in connexion with the apparent allusion to Gaulish relations in the expression *exagallias*, I was struck with some peculiarities of its style which seemed to indicate that the writer, having difficulty in expressing himself in Latin, conceived the thoughts which he had to translate into that language in some form of speech cognate with the Irish. One instance I already communicated to the Academy, where he employs the Latin *sed* as the equivalent of the Irish *acht*, in its non-Latin sense of *nisi*, “save”, “except”. I propose now to notice some other examples of a like kind.

Every reader of the *Confessio* is struck with the singular use of the verb *intermitto* in the passage where Patrick describes his escape from his master Milcu: “Et deinde postmodum conversus sum in fugam et intermisi hominem cum fueram vi annis”. This is quite an unexampled use of *intermitto*, which, in regular Latinity, never means to “leave”, to “quit”, to “separate from”, as the sense here, obviously suggested by the context, would require. But the Irish verb *ḙtarpparaim*, *inter-separo*, expresses the same meaning by a periphrasis possibly more appropriate to the occasion than a simple use of the word *relinquo*. I only know the compound verb in its substantive form *ḙarpparad* or *ḙtarpparad*, “separation” (O’D. in Suppt. to O’R., citing H. 2. 15, p. 516); but the one implies the necessary existence of the other; and the *intermitto* of Patrick seems an evident endeavour to fit a Latin equivalent to that combination of Irish vocables. *Sparaim* and *rcarolaim* appear to be originally the same; and the word to *scale* in the same sense is still a living expression in the North of Ireland, as in the *scaling* or breaking up of a congregation or of a school. In this connexion it may not be out of place to observe that, according to the version found in the *Lives*, the use of an expression importing some degree of mutuality in Patrick’s separation from his master would not be improper. For the writers of the *Lives* deny that he was a runaway slave: they allege that he purchased his freedom, and did not take to flight till after Milcu had received the gold, and refused to perform his own part of the contract.

Proceeding in the narrative of his flight, Patrick goes on to say: “Et veni in virtute Domini qui viam meam ad bonum dirigebat, et nihil metuebam donec perveni ad navem.” It may be doubted if a Latinist describing a going out from the country in which he was



writing would have made this use of the verb *venio*; but there can be no question of the anomalous nature of the expression *ad bonum*. So strange an appearance do these words present in Latin that the Bollandists readily adopted the spurious reading *ad benam*, conjecturing that the river Boyne was intended. The phrase has, however, been generally recognized by English translators as meaning "well" or "aright", and indeed justly so, though the fact does not appear to have been noticed that it is the literal Latin equivalent for the words 50 maic or co maic, the Irish form of expressing the same idea.

In the ensuing part of his narrative, after describing the incidents of his embarkation, and arrival in some other country, in which he appears to have experienced various hardships of travel and of renewed captivity, covering an ill-defined period, the writer finds himself again at home with his family among the Britons: "Et iterum, post paucos annos, in Britannis eram cum parentibus meis qui me ut filium susceperunt." The expression *in Britannis* means "among the Britons", not "in the Britannias", as would be signified by the form *in Brittanniis*, which is the reading of the amplified and later copies. The distinction, although a delicate one, has strong relevancy to the present inquiry; for *in Brittanniis* "in the Britannias" would possibly, if we may accept the authority of some texts of Catullus (carm. xxvii.), be a regular Latin form, though the mss. differ so much as greatly to detract from the force of Dr. Lanigan's use of the example (vol. i. p. 118); whereas *in Britannis* is peculiarly the Irish idiom in which a country is designated by the tribe or national name of its inhabitants, as in the scholium on the hymn of Fiech, where, glossing Fiech's statement that Patrick was born *in-nemthur*, that is, in Nemthur or Emthur, the scholiast adds, *Cathair sein feil imbretnaib tuaiscirt Ailcluide*. "This same city is in [among] the northern Britons, that is, Ailclyde" or Dunbarton (Lib. Hymn. fo. 15 a). Consequently, the same inference as in the previously cited cases would arise here also.

But whether the phrase be *in Brittanniis* or *in Britannis*, if it were used by an Irish writer, there will emerge in connexion with it a consideration of some moment as affecting the age of the composition itself. If scientific philology have not been led, in its phonetic back reckonings, into premature generalizations, this coupling of the preposition *in* with a dative rather than an accusative is characteristic of what is called Middle as distinguished from Old Irish; and the presence of such a form of expression here might disincline some enlightened minds from the belief that it could have proceeded from so early an epoch as the fifth century. Whatever grammatical difficulties of this kind may attend the inquiry, they will have to be balanced against extraordinary evidences of the genuineness of the *Confessio*, afforded not only by the fact of its early transcription (cir. A.D. 800) from a book even then in parts illegible from old age, and reputed to have been written by Patrick's own hand, but, in a still higher degree, by the flavour of earnestness, truthfulness, and sim-

plicity which breathes from all the composition, made even more persuasive by its inartificial and confused construction.

But for the additional matter supplied by the later copies, it would be extremely difficult to understand the purport or relevancy of some passages of the original. Whatever be the right opinion touching its equal authority, there can be no doubt that it gives such a degree of cohesion and consecutiveness to some of the scattered hints conveyed by the older copy, and is, in style and sentiment, so much in harmony, that it ought not to be passed by in this examination.

There is one specially obscure passage in the original in which reference is made to a writing intimating some personal dishonour: “*Vidi in visu noctis scriptum erat contra faciem meam sine honore.*”

With the aid of the supplemental matter it may be collected that an imputation on St. Patrick's good name had been made in some assembly of seniors, held in Britain in his absence, and that some one who had been instrumental in designating him for the Episcopate had taken an unfriendly part towards him on that occasion. This seems to afford a key to the meaning of “*contra faciem meam*” in the original. It is in fact word for word the Latin equivalent of the idiomatic Irish phrase *in aḡairb*, “against my face,” “in opposition to me,” the phrase by which an Irish-speaking person might properly refer to the presentment of a written accusation; and this also may help to explain the words next following in the original: “*Et inter hæc audiui responsum dicentem mihi Male audivimus [contra] faciem designati nudato nomine,*” as meaning “We are ill-styled in this script against one described by his naked name.” But I do not profess to account for the use, in the later copies, of the expression in reference to the same proceeding, “*Et quando temptatus sum ab aliquantibus senioribus meis,*” where *tempto* seems to be used in the sense of assailing or impeaching, though this also might be reconcilable if examined by a competent Irish scholar; but I incline to the belief that *temptatus* is written *per incuriam* for *tentatus*, which would be good Latin in the same sense.

This supplemental matter also furnishes what possibly may be an example of the characteristic transposition of the pronoun in Irish syntax. The writer regrets his inability, consistently with his duties to his country, to journey, as he would have desired to do, to Britain as to his country and parents, and even further yet, to Gaul, to visit the brethren and see the faces of the Lord's saints; and says, yet not I it was [who yielded to this sense of duty], “*sed Christus Dominus qui me imperavit ut venirem esse meum illis residuum ætatis meæ,*” where “*illis*” may answer to the infixed pronoun in some equivalent Irish sentence.

There are some other Latin peculiarities which, if they could be explained by Irish analogies, might actually contribute facts left unexplained in the *Confessio*. As, where the writer says his father, “*fuit vico Bannavem,*” the Latin leaves it doubtful was he *de vico*, as of that residence, or *in vico*, as there by a chance sojourn, which would

have a material bearing on the much-canvassed note of the scholiast on Fiech; and again, where he says at the close of the piece, "sed precor credentibus et timentibus Deum, quicumque dignatus fuerit inspicere vel recipere hanc scripturam quam Patricius precator, indoctus, scilicet hiberione conscripsit, ut nemo," &c., the Latin leaves it doubtful was it *in Hiberione*, or *de Hiberione*, was meant by the writer, in which latter case the *Confessio*, apart from the supplemental matter, might be regarded as addressed to external readers.

Supposing, however, that it were established never so clearly that Patrick, in writing his Latin, thought in Irish, there would be nothing surprising in the fact, and indeed, considering his long residence among the people using that language (he writes in his old age "in senectute mea"), the use of their speech might well have become habitual and even natural to him, while some other speech or dialect of his youth and early manhood might, it is possible, have been forgotten or disused. His own statement, however, in that respect is hardly consistent with the latter idea: "Nam sermo et loquela nostra translata est in linguam alienam," where he gives no hint of ever having used any but the one language and idiom.

**XXXVI.—FLINT IMPLEMENTS FROM THE RAISED BEACH AT LARNE AND OTHER PARTS OF THE NORTH-EAST COAST OF IRELAND. By W. J. KNOWLES. (Plates XIV. and XV.)**

[Read, June 11, 1883.]

I WISH very briefly to draw attention to a series of flint implements which I have obtained from the raised beach at Larne, and similar deposits at other places along the adjoining coast.

Various authors have referred to the "worked flints" of the raised beaches in their writings; but there seems to be a difference of opinion regarding these flint objects, some calling them "palaeolithic," and others "neolithic"; but the weight of opinion is decidedly in favour of the latter.<sup>1</sup> There is also a difference of opinion as to whether the worked flints are found mixed up with the gravel of the raised beach, or only scattered over the surface; but any attentive observer will have no difficulty in finding, even in the deepest section, that the flints extend to the lowest layer. I can refer to flints in my collection, showing human workmanship, which I obtained at different times during the past ten years at depths of eight, ten, and twelve feet.

The raised beach at Larne, as described by Mr. Hull,<sup>2</sup> is elevated fifteen to twenty feet above high-water mark. Good sections of it can be seen near the harbour where the railways pass through it, and also on each side of a new street which has recently been opened. Along the shore of parts of Island Magee, the coast northwards from Larne, and on both sides of Belfast Lough, there are remains of similar implement-bearing gravels, but all these have suffered greatly from denudation, and the gravels with the worked flints which they contained are now spread over the present shore. The material thus spread out has afforded excellent opportunities for examination, and several implements have been obtained from it.

As far as I am aware, all the objects which have been hitherto found in the raised beach, and described as implements, were in reality only flakes—artificially produced flakes, no doubt, but not specially dressed into any form of implement;<sup>3</sup> but several members of the Ballymena Naturalists' Field Club have made these old beaches a special study during the past year, and have succeeded in obtaining a considerable number of implements of a higher character than the mere flake. I may mention the Rev. Canon Grainger, M.R.I.A., and Rev. George Raphael Buick, M.A., as being the most active members in making these researches. Mr. Buick, who had favourable

<sup>1</sup> William Gray, M.R.I.A., *Belfast Naturalist Field Club Report*, 1876-1877. Edward Hull, M.A., F.R.S., *Physical Geology and Geography of Ireland*, pp. 110, 113. William Gray, M.R.I.A., *Royal Historical and Archaeological Association of Ireland*, 4th ser., vol. 5, July, 1879. John Evans, D.C.L., F.R.S., *British Association Report*, 1878, p. 522.

<sup>2</sup> *Physical Geology and Geography of Ireland*, p. 110.

<sup>3</sup> The objects found by G. V. Du Noyer, M.R.I.A., and which I have seen in the Royal College of Science, are not what I should call dressed implements.

opportunities for visiting Larne, was very diligent, and collected a fine series of implements, including a magnificent scraper, the largest I have ever seen. These, I think, he intends to describe and figure, and I shall therefore in any references I make confine myself chiefly to those objects which I have found myself. I had obtained an implement from the gravel of the raised beach as far back as 1873, and several other objects having the character of implements, since that period; but being spurred into greater activity by Mr. Buick's exertions, I have given the subject closer attention than usual during the past twelve months, and have not only gained a much clearer insight into the nature of the raised beach, but have added to my collection nearly one hundred implements.

Taking a general survey of the remains of the raised beach where it is spread out over the present shore, one is struck with the abundance of cores and flakes; but on looking for hammer-stones, of the kind usually got among the flakes and cores of other flint factories, they cannot be found. This absence of quartzite hammer-stones has struck several observers, and various theories have been advanced for their absence. I did not give this matter any special study until Mr. Worthington G. Smith, F.L.S., M.A.I., who has investigated river terraces in England, and discovered ancient palaeolithic floors and sites of manufactories, and found also an absence of hammer-stones, wrote to me for some specimens to distribute among workmen as examples. The subject being thus pressed on my attention, I made a thorough search among the cores and flakes at Larne, without being successful in finding any undoubted specimen of the characteristic quartzite pebbles with abraded ends, but I observed a considerable number of pear-shaped flint stones, which had received a considerable amount of flaking, and yet could not be described as cores. The real core had one constant character. Before the flint-worker commenced striking off a succession of flakes, the flint pebble he intended to work with was evidently first severed by a blow across its shorter axis, and from the flat freshly-broken surface the flakes were struck off at right angles; but the pear-shaped stones were very frequently nodules with a rounded or dressed butt, filling the hand well, and having small flakes radiating from the point. From experimenting with similar stones as hammers, I found small flakes were dislodged at the place where I struck; and this, taken in connexion with the fact that some of the smaller ends were more or less bruised, forced the conclusion on my mind that these were the hammer-stones used by the Larne flint-workers. I communicated this fact to Mr. Worthington Smith, and when visiting London in the autumn of last year I brought to him some of these implements, but he informed me that he had not at that time seen anything like them. In reply to a letter which I recently wrote to him on the subject, he says:—"As for the Larne hammers, and similar stones in gravel, I believe you are quite right." He has since found three quartzite pebbles with bruised ends, but "can always find rude nodules of flint showing probable traces of hammering." This opinion I look on as of very great value, as Mr. Worthington Smith has had much experience, having collected upwards of one thousand

palæolithic implements from the river gravels of England and different parts of the world.

The other implements which I have found are all rudely formed. I have a number which are pear-shaped, somewhat of the nature of the hammer-stones already described, but more pointed. Implements of this kind have been formed out of longish nodules of flint, somewhat cylindrical in shape, and often having a natural point, the amount of dressing being a minimum. The butt, where it did not fit the hand in the natural state, was neatly dressed, and a point was formed at the opposite end by striking off a few flakes. The body of the implement shows the natural outside coat of the nodule from which it was made; but any prong-like projections which came out from the surface have been neatly dressed off. Sometimes a natural point has been allowed to remain, and only projecting portions struck off. The largest of these are from six to seven inches long, and from six to eleven inches in circumference. There are others three and four inches long, but all are thick and plump, never flat and thin, as in some palæolithic implements. I believe that the majority of such implements would be passed by as not implements at all by the inexperienced observer. It is only when a series can be seen together that all doubts are removed from the minds of the sceptical. Fig. 1, Plate *xiv.* shows one of the smallest of these. It has one cutting edge and a point, and a shorter cylindrical body than the larger implements. There are, however, other implements which are better dressed. Some are of the kind known as shoe-shaped, are rudely triangular in section, having a thick butt, and pointed at the opposite end. There are still other implements among the series which I have found, which have both ends pointed, and many of the implements found by Mr. Buick are of this kind. These are oval, or longish-oval, but the points are often much blunted from use and rolling in water. Pointed implements seem to have been chiefly in demand with these ancient flint-workers, sharp edges being seldom found in any of these pear-shaped implements. Half pebbles and large flakes, sometimes more or less dressed, probably formed the cutting tools. The flakes are peculiar. We find them generally small at the bulb or cone of percussion, and thick and heavy at the opposite end. I have implements formed out of large flakes of this kind by removal of a few flakes near the bulb. The flakes found inland are generally, on the contrary, stout at the bulb, and taper to a nice spear-like point.

Those implements which are dressed all over have as a rule been formed by a very few blows, and these have often been unskillfully directed, as we frequently find that a flake has dipped so deep as to spoil the symmetry, and consequently some of the implements have a crooked appearance. Fig. 2, Plate *xiv.*, which I may say has a great likeness to a shoe-shaped palæolithic implement in General Pitt-Rivers' celebrated anthropological collection, is of this kind. Fig. 4, Plate *xv.*, has a great likeness to some palæolithic implements; and Fig. 3, Plate *xv.*, though in form somewhat like some neolithic flint objects, shows very rude workmanship. All the implements found at Larnie show a coarseness of manufacture which is not seen in other

implements found inland in the north of Ireland. If rudeness of workmanship be taken as a test of their age, I would say that these were the first efforts of man at forming flint tools, and that they were much older than the finely-finished implements of the palæolithic age found in the English and Continental river-gravels. I have one pointed implement, of the kind which comes nearest to some of the spear-shaped objects of neolithic age, found at Holywood, Co. Down, which shows the style of workmanship I refer to. It is four and a-half inches long, and one side is finished with three or four bold strokes. It has not suffered much from rolling, as it was found embedded in the stiff red clay, and has been stained all over a deep reddish brown, which gives it a very handsome appearance. (See Fig. 5, Plate xv.).

The flakes, cores, and implements, as seen in sections of the raised beach, show signs of having been exposed on the shore for a long time previous to becoming embedded among the gravel. They have undergone rolling on the beach, and are covered even to the small flakes, which were evidently dislodged by striking against other stones, by a white, deep, porcellanous crust. As far as my experience goes, this crust only forms on flints that are exposed for a considerable time, and not on those which are buried up after being broken. I have found flints in other places which have the porcellanous crust on the exposed side, and are comparatively fresh on that which rested on the ground; and I have in my possession palæolithic implements showing the one side much more deeply encrusted than the other; but the flints of the raised beach are crusted all over, and much more deeply than the flints of other parts of Ireland, or indeed than any palæolithic implements I have ever seen.

I conclude therefore that the flint objects found at Larne and other places where there are remnants of the old beach have lain exposed for a long time, and have undergone much shifting and many changes before being included in the mass of gravel. This, I think, would partly account for the scarcity of bones in the formation, as the bones of the animals used as food would be too long exposed before being covered up to have a chance of preservation. I have made a very thorough search for bones, but without success, and I am therefore without any test of that kind in enabling me to come to a conclusion regarding the age of the implements. A Mammoth's tooth, now in the collection of the Rev. Canon Grainger, has been found in the neighbourhood, but it may have had no connexion with the raised beach. It was, however, found not far from the shore, near a place where remains of the old sea beach are still to be found.

In taking a survey of the raised beach I find it extends at Larne for a considerable distance inland, and its surface is now made up of several large arable fields, some of them at this moment bearing a promising crop of wheat. I was induced from observing this to examine the soil, and found that it was not of the sandy or gravelly nature one would expect on a sea beach, but was made up largely of clay, and would be what I should call a clayey loam. The stones of the soil, besides the flints which are turned up to the surface, are

ordinary basaltic stones, angular and unrounded, with the rough, weathered, brownish crust, such as one sees in the soils which have been derived from the boulder clay further inland. In examining the upper layer of the beach I found it full of such rough stones, mixed with clay, and a question was raised in my mind as to the derivation of this soil, and the agency employed in bringing it there. The boulders and gravel in which the flints are embedded are heaped together in a most irregular manner, and, in the majority of sections I have had the opportunity of examining, there is a general absence of any stratified arrangement, such as would ordinarily be made by water. Turning all these matters over in my mind, the whole formation appears to me not to be a raised beach in the ordinary sense of the term, but rather something of the nature of an Eker which has received glacial matter on its surface at a time of submergence. If I am correct in the various suggestions I have made regarding the nature of this so-called raised beach, the term "palæolithio" might be too modest an application for these implements. They would probably be the oldest implements not only in Ireland but in the British Isles. At the meeting of the British Association in Dublin, 1878, I stated that I thought there was reasonable suspicion that the Larne implements and other objects I exhibited were older than neolithic. By longer study I may say that I am the more confirmed in this view. Laying aside for the present the question of the nature and derivation of the deposit in which the flints are embedded, until I investigate the matter further, I believe the implements from the raised beach are not neolithic, for the following reasons:—

1. Neolithic implements are found scattered over the surface, and are frequently described as "surface implements," to distinguish them from the more ancient implements from the caves and river gravels. The implements found at Larne have not this character. They are not surface implements, but are found embedded in a formation of gravel of considerable thickness.

2. The form of the implements is not that of the objects which we have hitherto known as neolithic.

3. The workmanship is different from that on undoubted neolithic implements.

4. The deep porcellanous incrustation; and

5. The ancient and primitive appearance of the implements themselves.

#### NOTE ADDED IN THE PRESS.

Since reading the foregoing Paper the author has found in the neighbourhood of Larne, in undisturbed boulder clay, an artificially-chipped object. He has also found another object, which he classes with the pear-shaped implements referred to in the Paper, having, as he believes, glacial scratching on an artificially-dressed surface. He has also found, not far from Larne, eleven feet down in gravel, capped by thirty feet of boulder clay, two flakes with well-marked bulbs of percussion, and several objects having the character of cores. The author exhibited some of these objects in illustration of a Paper read before the Anthropological Department of the British Association, in September, 1883; and further information regarding them will be communicated to the Academy at an early date.



**XXXVII.—ON EVIDENCES OF THE PLAN OF THE CLOISTER GARTH AND MONASTIC BUILDINGS OF THE PRIORY OF THE HOLY TRINITY, NOW KNOWN AS CHRIST CHURCH CATHEDRAL, DUBLIN. By THOMAS DREW, R.H.A., Cathedral Architect, 1882. (Plate XVI.)**

[Read, November 13, 1882.]

THE cloisters stood on the south side of Christ Church Cathedral, between the nave and the present railing in Christchurch-place. The abbey gateway stood exactly under the doorway of the present south-west porch, but some ten feet below it. The chapter-house stood seven feet to the south from the south transept.

For many years the site and plan of the cloister garth and the surrounding monastic buildings, which must once have been a part of the Priory of the Holy Trinity, have been a matter of curious speculation to me. The church alone has survived to our time. I knew it all before Mr. Henry Roe's great restoration. Every detail of that restoration, with its marvellously interesting revelations of the church's former plan, was familiar to me, as all the church is now. I had read all that is known to be recorded of it, but without meeting the most slender clue to the history or existence of the former subsidiary buildings of the monastic establishment.

By Mr. George Edmund Street, R.A. (to whose marvellous instinct for the comparative anatomy, as I may term it, of a mediæval building and profound architectural erudition we owe the re-creation of this perfect and unique twelfth and thirteenth century church, from merest shreds of evidence) the site or plan of the monastic buildings was untraced and uninvestigated. I know this from the interesting account of the restoration penned by this great architect himself, and left unpublished at his death, the proofs of which, before its coming publication, it has been my privilege to read. It has been a matter of great interest to me, following, *longo intervallo* indeed, so great a master in the care of this cathedral, to alight upon some threads of evidence, not only to identify the site of the monastic buildings, but to trace their plan with a bold hand, leaving but little conjectural of what goes to fill in the outlines.

I have long looked for even a hint to aid speculation as to whether the cloisters stood upon the north or south side of the church, as they indifferently do in the monastic plan. I inclined to surmise on the north, as nothing more unlikely than the south side as it exists, a steep declivity between Christchurch-place and the cathedral, as a site for the level of a cloister garth could have suggested itself. I had scarcely entertained a thought of looking for anything so improbable. However there is preserved in the cathedral, by some happy chance, a comparatively modern document, a map and survey of the cathedral property, with a schedule, prepared by one John Sedding in 1761. It

shows the old Four Courts, and the passage then colloquially known as "Hell," the Exchange, and, as the schedule quaintly sets forth among other things, "the place where the Stocks is";<sup>1</sup> it delineated the many houses and small tenement holdings in Skinner-row, now swept away, and the two "yards" surrounded by shops and small booths intervening between these and the south side of the cathedral.

Looking at Sedding's map, the last thing that would strike most people would be to develop the plan of a monastery out of it. Views of the cathedral from the south-east, given by Grose in 1791, and drawn as late as 1821 by George Petrie, give a rude notion of what the "Exchange" was. It is at once recognizable as a mediæval groined building, and Sedding's schedule sets forth the chambers over it. I have no doubt those very ones offered by an advertisement in a Dublin paper of that time—

"To let, apartments in Hell.  
N.B.—Well suited to a Lawyer."

Further information as to the "Exchange" was given me from a map, the accuracy and authenticity of which I cannot well doubt, from its internal evidence, although the sources from which it may have been compiled are a mystery.

Bound up in Kelly's new (and uncompleted) edition of Archdall's *Monasticon Hibernicum*, vol. ii., is a map of Christ Church Cathedral and precinct, evidently not drawn for this work. The text has no reference to it, and the reference figures on it are sought for in the body of the work in vain as having any meaning. I have, however, ascertained that this map was intended for a work by William Monck Mason, never published. It would appear that his well-known history of St. Patrick's Cathedral was not intended to be a monograph, but the first instalment of a great and ambitious work, *Hibernia Antiqua et Hodierna, being a Topographical Account of Ireland, and a History of all the Establishments in that Kingdom, Ecclesiastical, Civil, and Monastick*. I have the prospectus of the volume relating to Christ Church projected in 1819. This projected volume never saw the light, and the MSS. and raw material collected for it found their way to what is known as the Phillips collection, locked up from scholars at Cheltenham. The steel plates intended for it were sold at an auction in London, bought by Mr. Kelly, and inserted *passim* in his new *Monasticon Hibernicum*, to adorn the work, merely. Mason's map gives the Exchange as a four-bayed groined building.

It scarcely needs a glance from anyone acquainted with the typical monastic plan and its varieties to recognise this building as the ancient CHAPTER-HOUSE in its usual and expected place with reference to the church. It stands east and west, about seven feet away from the south transept, and the views above referred to show us the monks' dormitories over it. The passage that intervenes between the chapter-house

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<sup>1</sup> The Stocks are still preserved in the Cathedral

and transept in Sedding's map gives, where one would look for it, the staircase by which the monks passed from their dormitories to the church. Knowing that the south transept had been greatly altered in 1831, when the old door, brought from the north side, was inserted in the middle of it, I looked for a trace of the monks' door where it should be, and then found it plainly indicated by the built-in masonry to the left of the present doorway. Here were clues, absolutely determined, to point to the existence of cloisters on the south side.

To the south of the chapter-house, in most monastic plans, one looks for the passage called the "slype." Here it is found clearly defined in the old plans, remembered by some still living citizens, and familiarly known by the more modern name of "Hell," even so far away as to Robert Burns. The lines have been often quoted:—

"But this that I am gaun to tell,  
Which lately in a night befel,  
Is just as true as deil's in hell  
Or Dublin city."

We know that next to the "slype" would come the kitchen, or "calefactory", the day-room of the monks, its limits only wanting to be defined, and which Sedding's map supplies when studied.

This would have been all to be derived from Sedding's plan, but for another thread of evidence. I had occasion, in 1881, to cut a deep drain across the cathedral precinct, on the south side, and I looked with interest for the uncovering of part of the walls of the old Four Courts.<sup>2</sup> I found the walls where I crossed them exactly as laid down in Sedding's plan, but found a remarkable difference in the walls themselves. The east and west walls of the old Court of Common Pleas did not go down to a deep foundation, but were borne above the peat stratum on great beams or cradles of massive oak. The west wall of the King's Bench, however, was different. It was carried down to a greater depth, to the solid foundation beneath the peat, and was an enormously solid mass of ancient masonry. Here I recognised an ancient wall of the monastery. I also laid bare and ascertained the ancient level of the cloister garth, finding it about nine feet below the church floor, and nearly on the level of the floor of the crypt. This solved several problems of built-up doorways, steps, and approaches, which had puzzled everyone. The existence of a cloister garth at such a level, levelled for and scooped out in the side of a steep declivity, was unexpected.

A practical mind will at once infer the existence of a great retaining wall somewhere that would be required to keep back the overhanging bank on the south side. Sedding's map at once indicates it. A narrow yard, or area—say four or five feet wide—which may

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<sup>2</sup> The Four Courts were built upon the site, and in part on the foundations of the monastic buildings and cloister garth by the Crown, in 1695; the Dean and Chapter receiving £10 per annum rent for the ground. The last remains of these were covered in about 1826.

be traced along the back of the houses in Skinner's-row, described as, for instance :—

“The precinct wall, serving as a backside to the houses of Mr. Wingfield and Mrs. Parsons, in Skinner's-row, and giving light to their back rooms.”

Thus I can trace the limit of the monastic buildings at the south side. I was disappointed to come on no remnant of the eastern precinct wall, in what is now St. Michael's-hill, but Mason's map lays down its limit, and it exactly coincides with the line of the west side of Christchurch-lane, as it existed in 1761, about the centre of the present roadway. It is parallel with the ancient wall to the west of the King's Bench Court, before alluded to, so that here we have, with but little conjecture, the limits defined of the *DOMUS CONVERSORUM*, sometimes known as the Common House, which we would look for in the usual monastic plan, and we recognise, under a misunderstood and corrupted name, the “Commons House” of Christ Church Cathedral, so often mentioned in records, where sundry parliaments were held, the last in 1559; not a “House of Commons,” but the common house of the guests, postulantes, and brethren of the monastery.

Analogy of similar plans would lead us to look for the abbey *GATEWAY* in the north-west corner of the group, and then we suddenly recall that we all remember it, unrecognised as such before the late restoration. There are photographs showing it extant. Little knowing that the cloister level lay nine feet under the surface of the soil, one did not recognise in the cellar-like arch above it the head of the Abbey Gateway. Its site was exactly under the doorway of the present south-western porch. A *GATEHOUSE LODGE*, or parlour, should have been about here; my restoration of this feature is purely conjectural. Assuming the precinct boundary to fix the width of the Common House, I conjecture it as arched in two spans, with a row of pillars down the centre, as would be most usual in such a building.

For the *REFECTORY*, I have only, I admit, such slender evidence as the precinct boundary well-defined, and the analogy of other monastic plans affords: we know from precedents that it should be traced here. Taking all the evidence which has been recited, and other minor corroborative hints which the old plans afford, one can sketch the cloister plan so far, but to find that there would not be room for the refectory to stand east and west in the usual way, between the south cloister walk and Skinner's-row. It could not have projected from the group standing north and south, as it does in other places; because the limit of the precinct forbids. One then recollects the declivity of the ground, and that if it had been planned upon the same level as the cloisters, it would have been many feet below Skinner's-row, and that passers-by would have looked down into its chimneys. Everything points to the conclusion that the refectory was not on the ground level, but on that of the dormitories, and extended over the south cloister walk. Here, again, the plans give

faint indication of a passage next the kitchen, which would exactly serve in position for a staircase between the kitchen and refectory.

The following are definitely or approximately the internal dimensions of the several parts of the plan:—

|  |                  |
|--|------------------|
| Cloister garth and Cloisters, . . . . .                    | 76 ft. by 84 ft. |
| East Side—Dormitory staircase leading to church, . . . . . | 25 ft. „ 7 ft.   |
| Chapter-house, . . . . .                                   | 42 ft. „ 20 ft.  |
| Slype, . . . . .   | 28 ft. „ 8 ft.   |
| Kitchen, . . . . .   | 30 ft. „ 30 ft.  |
| South Side—Staircase, . . . . .                            | 26 ft. „ 7 ft.   |
| Refectory, . . . . .                                       | 75 ft. „ 33 ft.  |
| West Side—Common House, . . . . .                          | 82 ft. „ 29 ft.  |
| Lodge, . . . . .   | 29 ft. „ 10 ft.  |
| Gateway, . . . . .   | 17 ft. „ 7 ft.   |

Beyond the cloister walls, speculation can but vaguely follow the existence of the inferior buildings of the monastery. The broken outline of the precinct suggests the projection of square buildings, and one places the finger on the spot where the INFIRMARY would most likely be. A shred of evidence is, I believe, locked up in a term I cannot construe. Sedding, in his schedule of tenements, describes several of them in this wise, *e.g.*:—"23. Part of *Coolfabius* as a backside to Mr. Sillcock's house in Skinner's-row."

When I trace out the plots described as "*Part of Coolfabius*," and obliterate modern boundaries and walls, I find that this is a *corner* by the east wall of the kitchen, and under the great overhanging wall of the precinct. I believe I recognise in the name the Irish word, *cúil*, a corner, and I look with confidence to some better antiquary to interpret what this corner was.<sup>3</sup> It is the spot where one would look for the offices of baser use; the middens, privies, and great drain from the kitchen.

Under the present green sward, between the railings of Christ-church-place and the church, antiquaries may assume the foundations of these buildings lie, and may yet be investigated. It may be a parallel for the discovery of a fragment of the cloister of old St. Paul's, which has led to the creation of a pretty garden in the heart of London, if we should some day uncover some of our cloisters to be an object of interest in the city garden, which, I hope, may be created in the yard of Christ Church Cathedral.

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<sup>3</sup> Dr. Joyce, on being consulted, is unable to form an opinion as to the meaning of this name.

## XXXVIII.—ON THE GEOGRAPHY OF ROS AILITHIR. By REV. THOMAS OLDEN, B. A.

[Read, February 26, 1883.]

THE geographical poem, which is found in the Book of Leinster (pp. 135, 136 of the Facsimile), is there attributed to Mac Cosse *Ferlegind* of Ros Ailithir, now Ross Carbery in the south-west of the county of Cork. Archbishop Ussher quotes several authorities as to the high reputation this school enjoyed at an early period; and the name Ros *Ailithir*, or Ross of the Pilgrims, would seem to indicate that, in addition to native students, it was largely attended by foreigners. It is well known that natives of all parts of Europe north of the Alps came to Ireland for instruction; and this school, being on the sea-coast, and easily accessible from England and the Continent, must have had a large number.

The Mac Cosse who is mentioned in the Annals of the Four Masters does not appear to have been the author of the poem, as his office was a different one; but a passage in the Annals of Innisfallen, for which I am indebted to the Dean of Armagh, notices him. It is found at the year A.D. 972, and is as follows:—

“The son of Imar left Waterford, and [there followed] the destruction of Ross of the Pilgrims by the foreigners, and the taking prisoner of the *Ferlegind*, i. e. Mac Cosse-do-brain, and his ransoming by Brian at Scattery Island”.<sup>2</sup>

Dr. O'Connor, who edited the Annals of Innisfallen, translates his official title, *Ferlegind*, by *prælector*; but perhaps his position was rather that of head master, in whose charge the studies of the school were placed. As such, he was a person of importance; and when the Danes carried him off, no doubt they demanded “egregious ransom” from the benevolent young prince who redeemed him, and who was afterwards better known as the famous Brian Borumha.

This entry helps us to ascertain the date of the poem; for we may assume it to have been composed before the destruction of Ross, and therefore it could not have been later than A.D. 991,<sup>3</sup> but it may have been much earlier, and we shall probably be near the truth if we assign it to the third quarter of the tenth century.

It seems to have been the school geography of Ross; and as so little definite is known of those early schools, a notice of it with a

<sup>1</sup> Remains of Rev. A. W. Haddan, p. 260.

<sup>2</sup> Mac Imar do deruch puirt lairg, ocus indreth Ruis Ailithir do gallaibh, ocus in fer-leghind do gab[ail] doib, i. e. Mac Cosse-do-brain, agus a chennach do brain oc inis Cathaigh.

<sup>3</sup> The Annals of Innisfallen are antedated by nineteen years in Dr. O'Connor's edition, and the correct date is therefore 991.

translation will be useful to those who desire to know on what grounds their reputation rests.

It consists of one hundred and thirty-six lines in the usual metre of seven syllables, and may be described as a brief summary of the geography of the world; in most cases giving only the boundaries of the different countries, with an occasional reference to some characteristic of the people or territory, and in a few instances a longer description. There is no allusion to the form of the earth. To the north of Asia flows the great External Sea, which also stretches across the north of Germany, then the limit of Europe in that direction. The eastern boundary of Asia is undefined. To the south, from India to Africa, is the *Mare rubrum* or Red Sea, of which the Persian Gulf and the present Red Sea are inlets, and for this reason are not distinguished by separate names. The south of Africa is wholly unknown, and its coast is supposed to trend north-west from about Cape Gardafui to Cape de Verde, the shape of the Continent being nearly that of a right-angled triangle. On the west flows the Ocean, which appears to be the same as the External Sea. He begins by describing the five zones of temperature—

In the body of the firm world are known  
Five equal zones marked out;  
Two frigid of bright aspect,  
Two temperate around a fiery.

This is the division given by Virgil,<sup>4</sup> who took it from a more ancient source.

The human race inhabits the north temperate zone, which comprises the territories included within the seas already mentioned. It is divided into three parts—

[There are] three parts of the world, West and East,  
Three parts in which are Adam's seed;  
Three parts which God divided,  
Europe, Africa, and Asia.

The order in which the continents appear here is due to the necessities of the metre; but in the geography it is reversed, Asia taking the first place—

Asia, very good on every side,  
From the Queen it was named;  
Asia was her name in the East,  
The woman who ruled over the Eastern world.

It is much larger than the other continents, which is owing to this queen having encroached on Europe and Africa—

Asia, not insignificant; in the East it is,  
Across the eastern part of the temperate [zone];  
Almost half [the zone] took she by force  
From Europe and from Africa.

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<sup>4</sup> See p. 230, note *a*.

Going into detail, he begins with the Garden of Eden :—

## V.

Its [Asia's] beginning seems to be in the East  
The land wherein is the paradise of Adam ;  
The land where one need not prepare a feast,  
The land around which is a wall of fire.

It was the universal belief of the middle ages that Paradise still existed, and its position was a favourite subject of speculation. Cosmas, in the seventh century, says it occupies a continent in the east of Asia, and is still watered by the four rivers springing from subterranean canals. Gautier de Metz, in his poem "*Image du monde*", written in the thirteenth century, places it in an unapproachable region of Asia surrounded by flames, and having an armed angel to guard the only gate. The mediæval preacher Meffreth, in his second sermon for the Third Sunday in Advent, discusses the subject, and claims St. Basil and St. Augustine as his authorities for stating that it is on the top of a lofty mountain in Eastern Asia, so high that the cascade of the four rivers falls with such a roar that all the natives near are stone deaf. But these are later than Mac Cosse, and he is probably indebted to Tertullian, who says : "If we speak of Paradise, it is a divine pleasance appointed to receive the souls of the saints, and hidden from the observation of the common world by a girdle of fire, which encloses it like a wall."<sup>6</sup> There is a map in the Library of Strasbourg belonging to the ninth century, and another at Turin, both of which place Paradise in the extreme east of Asia ; and we may infer that our author followed some such map, as it appears from the next verse that it lay to the east of India, which is described as follows :—

## IX.

From that land to the river Indus westward  
[Is] India great and proud ;  
From the north from the Hindoo Coosh,  
To the strait of the Mare rubrum.

## X.

Known is its excellence on every side,  
Its magnets and its diamonds ;  
Its pearls, its gold dust,  
Its gold and its carbuncles.

## XI.

Its unicorns of fierce habit,  
Its soft and balmy breezes ;  
Its elephants of mighty strength,  
Its two harvests in one year.

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<sup>6</sup> Page 232, note f.



Here we have a knowledge of the properties of the magnet noticed, and the diamond, pearl, and carbuncle mentioned. It is probable that these allusions were enlarged on and illustrated by the teachers; for in Bede's description of these schools he represents the students "as going about from one master's cell to another",<sup>6</sup> evidently seeking information on the subject of their studies. The references in the poem thus became themes for more extended instruction, and there is no reason why the properties of the magnet which were known to Pliny may not have been lectured on; or the diamond mines of Bengal, from which, according to Gibbon, the Romans were supplied with diamonds; or again, the pearl fishery of Ceylon.

Passing over several countries in Asia, we come to the following in verse xv. :—

Chaldea and Babylon the strong,  
Are conspicuous between Arabia,  
And the plain of Shinar northward,  
Wherein was built Nimrod's tower.

That Nimrod was the builder of the Tower of Babel is not in accordance with the Book of Genesis (chap. x.), but it was the constant tradition of the middle ages, and was no doubt derived from Josephus. The form of the name here (Nebruaid) is that of the Greek Septuagint Version. The Irish seem to have been much attracted to him as a warrior and mighty hunter. In a poem of Gilla Coemain he appears as "the giant Nebrodes," and Dr. Keating also refers to him as the builder of the Tower of Babel.

The prevalence of this tradition also appears from the mention of it by Dante—

Nimrod I saw :  
At foot of the stupendous work he stood,  
As if bewilder'd, looking on the crowd  
Leagued in his proud attempt on Sennaar's plain.<sup>7</sup>

Passing on still westward we come to Palestina, or, as otherwise written, Felistina. In O'Curry's Lectures, where the latter form occurs, he is uncertain whether it means Palestine or not, but here there can be no doubt that it does. There are several very curious linguistic changes in the poem which are worthy of notice; but I refer to this particularly for a reason which will appear farther on. The verse, xix., runs thus—

Palestina the glorious [land],  
There are the sons of Jacob;  
To the south the vigorous Nabatheans  
And the lands of the Saracens.

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<sup>6</sup> Ecc. His. Lib. iii., cap. 27 : "alii magis circumeundo per cellas magistrorum lectioni operam dare gaudebant".

<sup>7</sup> Purgatorio, xii. 34. See p. 233, note j.

The later Roman writers applied the name Saracen to all the Arabian tribes, but our author, who distinguishes them from the Nabatheans, appears to have followed the earlier account of Ptolemy, in whose time they were a small tribe between Palestine and Egypt.<sup>8</sup>

The inhabitants of Sodom (xx.) he seems to regard as still occupying their original seat; but the explanation probably is, that he is simply illustrating a map.

In No. xxi. we have—

Egypt of famous deeds,  
Most fertile of all lands,  
Along by the river Nile southward  
It is neighbour to Africa.

From this it appears that Egypt was regarded as forming part of Asia. The earlier geographers, Ptolemy and Strabo, fixed the Arabian Gulf and the Isthmus of Suez as the boundary between Asia and Africa; but the later, as Dionysius, Mela, Pliny, and Solinus, preferred the western branch of the Nile, thus giving to Asia all between the Nile and the present Red Sea. This is the view our author follows.

Passing on to verse xxiii.,

In that eastern land of many deeds  
Are the Seres of ancient fame;  
For there are woods there  
Whence, no wonder, [comes] their wool.

The earliest writer who refers to the Chinese as combing the silk called "soft wool" from the trees, is Virgil,<sup>9</sup> whose account of it is probably the source of the mediæval stories on the subject. He was not aware of the existence of the little worm which accounted for the phenomenon.

We have next a reference to Scythia and the griffins who protect the gold and precious stones there, probably a distorted rumour of the gold mines of the Ural,<sup>10</sup> and then in xxvi.—

Land of Alaunia [where is] a burning fire,  
From the Caspian Sea to the [palus] Mæotis  
Known are their tribes in west and east,  
A fair-haired people.

There were two branches of the tribes known to eastern writers as the A-Lau or A-Lau-na, and to the Romans as the Alauni.<sup>11</sup> Originally occupying part of the Scythian desert, they were invaded by the Huns, when some of them joined their conquerors; others passed to

<sup>8</sup> Page 235, note 1.

<sup>10</sup> See p. 236, note p.

<sup>9</sup> See p. 236, note o.

<sup>11</sup> See p. 236, note r.

the south and occupied part of the Caucasus. This is the district referred to here. The mixture of Sarmatic and German blood had, according to Gibbon, contributed "to improve the features of the Alauni, to whiten their swarthy complexions, and to tinge their hair with a yellowish cast." Thus our geographer's description of them is quite exact. We have now to notice the flaming fire. I find that in this territory there is a phenomenon known to this day as "the eternal fires." It has been described by several travellers, among them Sir R. Ker Porter, whose account of it is as follows:—"Bakou, the smallest, but one of the most valuable, of the Russian conquests south of the Caucasus, occupies a peninsula of the Caspian called Absheran. It derives great wealth from the produce of its naphtha springs; these fountains of light and profit are deemed inexhaustible. At a short distance from the springs spreads the celebrated burning plain to a distance of nearly a mile. Here both the ancient and modern disciples of Zoroaster came in thousands to adore the eternal flame, and to convey to their own hearths a portion of the sacred flame."<sup>12</sup> He quotes the account of a previous traveller, who says: "The whole country around Baku has at times the appearance of being enveloped in flames. It often seems as if the fire rolled down from the mountains in large masses with incredible velocity." Sir R. Porter says there are two kinds of naphtha, the black and the white, the latter being much thinner. It was used medicinally—inwardly for chest complaints, and outwardly for cramps and rheumatism. Marco Polo speaks of its being used for cutaneous distempers in men and cattle. So saturated is the soil with this naphtha that Sir R. Porter says they have only to make an incision in the floor, and on a light being applied to it the flame immediately arises. With the fire a gas also arises: leathern bottles are frequently filled with this gas.<sup>13</sup> The writer of the article on Baku in the new edition of the *Encyclopædia Britannica* says, the first to mention Baku and its fire-breathing mountain was the Arabian writer Masudi, in the tenth century; but this is also the date of our geography, and, if the writer is not mistaken, it is remarkable that it should have been known as early here as by the Arabian writer.

The reference to naphtha springs has led me to make inquiries, and I have found that the properties of naphtha, also called petroleum, were well known to the ancients. It is frequently mentioned in the Talmud. Thus in Buxtorf's *Talmudical Lexicon*<sup>14</sup> a passage is quoted, in which St. Jerome says that naphtha was used by the Persians for burning. "The Hebrews mean by it the kind of oil which the author

<sup>12</sup> Sir R. Porter's *Travels*, vol. ii. p. 215.

<sup>13</sup> *Ibid.*

<sup>14</sup> S. V. נפט Hieronymus scribit: Salustius scribit in historiis quod naphtha sit genus fomentis apud Persas quo vel maxime nutriantur incendia. Hebrei intelligunt eo genus olei quod Author Aruch vocat Petroleum cujus usus prohibitus Judæis in Sabbatho quod sit odoris tetri.

named Aruch terms petroleum, the use of which was forbidden to the Jews on the Sabbath because of its evil odour."

He gives also the following from the Talmud, which shows how familiar an article of commerce it was:—"A certain seller of petroleum was in the barn of Rabbi Jona. A fire broke out in the barn. The seller of petroleum wished to go and put it out, but he would not allow him" (lest he should break the Sabbath).<sup>15</sup> In this connexion may be mentioned the strange story in 2 Maccabees, chap. i., of the Jewish priests concealing the sacred fire in a dry well before the Babylonish Captivity, and their grandsons, on the return of the Jews, having found it. It would appear from verse 36<sup>16</sup> that this was petroleum. Plutarch says Alexander the Great saw with much surprise the petroleum "welling out from the rocks," when in the East.

But not to digress too far, it is singular to find the eternal fires of the Caspian known in Ross Carbery in A.D. 991.

Passing on to No. XXXII., we have—

Cessair on the shore of the sea of Eig,  
 Germain west from it with pure heights;  
 From Germain west to the sea,  
 Sidon with its neighbour towns.

I had much difficulty in identifying several places in the geography, but more in this case than in any other; and I do not offer the solution which I propose with entire confidence. On referring to the Peutinger map of the district, Sidon appears due west of Cæsarea Philippi, its true position being north-west. Thus it was probable that Cessair was this Cæsarea; but then what is the Sea of Eig, and what Germain? There is great confusion as to the geography of this part of Palestine in maps which assume to represent its ancient condition; but on referring to Josephus I found that he gives an account of the rebuilding of Paneas by Philip, Tetrarch of Iturea, who named it Cæsarea from his imperial patron, and Philippi from himself. Josephus repeatedly states that it was near the springs of Jordon,<sup>17</sup> and he sometimes calls the place merely Pégé (πηγαί), the springs. Now, according to the Rabbins, there were seven seas in Palestine, one of which was the sea of Apaméa, the position of which was not generally agreed on, but many were of opinion that it was the lake or sea of Paneas, at the springs of Jordan: the word being written Pameas by

<sup>15</sup> נִפְתָּחִים Naphthæus, id est, vendens naphtham aut petroleum. Quidam *ναφθοώλης* erat in granario R. Jonæ; ortum est incendium in granario. Abiens itaque naphthæus seu *ναφθοώλης* voluit extinguere illud sed non permisit ei ne se violaret Sabbathum, Schab. cap. 16.

<sup>16</sup> προσηγορευσαν δέ δι περὶ τὸν Νεεμὶαν τοῦτο Νεφθα ο διεμνηνευεται καθαρισμος· καλεεται δέ παρὰ τοῖς πολλοῖς Νεφθαι, ii. Maccabees, i. 36. In Vulgate Nephthar, Nephi.

<sup>17</sup> παρὰ τὰς ἰορδάνου πηγὰς· καλεῖται το Πάνιον ὁ τόπος. De Bell. lib. i. cap. 21, sec. 3. Φίλιππος πρὸς ταῖς Ἰορδάνου πηγαῖς ἐν πανέαδι, πόλιν κτίζει καισαρείαν. Antiq. lib. xviii. cap. 2, sec. 1. Also xv. 10. 3, and iii. 10. 7.

the Talmudists. This may or may not have been so; but if it was generally accepted in early times it is all we have to do with. In this view, then, the words "on the shore of the sea of Eig" appear to refer to this sea, for Cæsarea was built at Paneas, "which (says Lightfoot)<sup>18</sup> let the maps observe that they place it not too remote thence,"<sup>19</sup> and, in fact, most maps do. But Paneas was also "the springs," Pégé, and taking this as a proper name the *p* becoming *f*, as in XIX., and the *f*, being aspirated, or by the simple loss of *p*, we have the sea of Egé or Eig.

But what is Germáin? The word occurs elsewhere for Germany (II.), but without the accent. Here it is clearly not Germany. In the Peutinger map already referred to, a range of mountains is shown between Cæsarea and Sidon; they are not named, but, according to the Rabbins quoted by Lightfoot, the mountain overhanging Cæsarea was "the mountain of snow,"<sup>20</sup> otherwise Hermon. The *H* of this word (*heth*) has the force of *Ch.*, and the name, written as Chermôn,<sup>21</sup> is as fairly represented by Germáin as is usual with names in this geography; while the expression "with pure heights" exactly answers to the rabbinical name of the mountain of snow.

We now come to part II. of the geography, which treats of Africa.

## XXXIV.

It was Apher, son of Keturah and of Abraham,  
Who gave his name to Africa  
As an appellation, in memory of his wounds,  
From [carrying] a wallet he was named.

This is a story from Josephus, who says Abraham had several sons by Keturah, who are not mentioned in Genesis. One of these was Ophren, who waged war against Libya, and took it, and from him Africa was called. He quotes several ancient authors for this.

The next verse is—

The name of Libya [is] from the pleasant brook  
Which trickles to the headland,  
Or from the pure sweet-voiced mother  
Of Agenor, king of Africa.

Here there is evidently a derivation from the Greek.<sup>22</sup> It should be observed that the flourishing Greek colony of Cyrené adjoined Libya. The two territories are connected in the Acts of the Apostles,

<sup>18</sup> Lightfoot, *Horæ Hebr.* vol. ii. p. 62.

<sup>19</sup> *Ibid.* p. 63.

<sup>20</sup> *Ibid.* p. 62.

<sup>21</sup> הרמין. The name was generally used in the plural, הרמנים, *Hermonim*, the mountain having several distinct summits. Germáin here may be also a plural.

<sup>22</sup> P. 239, note z, also note v.

where "the parts of Libya about Cyrené" are referred to, and it is possible that the Greek-speaking inhabitants, as is usual in popular etymology, did interpret the name Libya in their own tongue.

In Stanza *XLII.* we have the Nile—

A river flows across Africa from the west,  
From Mount Atlas and the ocean :  
Dars [*is*] its name at its source,  
But in the east its name is Nuchul.

*XLII.*

It flows in the east underground for a space  
Amongst the learned Egyptians ;  
Nile [*is*] its name, from Cammus westward,  
Till it reaches the Torrian sea.

This is the account of Juba, king of Mauretania, and of Pliny, though the names vary a little. Mela traces the origin of the Nile to a lake called Nuchul.<sup>23</sup> It would appear that travellers meeting with different rivers in the interior, and finding in them the same monsters, such as crocodiles, and the same vegetation on the banks, concluded that they must be parts of the same river, which reminds one of Captain Fluellen's comparison—"There is a river in Macedon, and a river in Monmouth, and there is salmons in both."

*XLIV.*

By the river to the south there is  
A fountain that is cold when full day comes.  
It is hot, though far from the sea,  
From the time that full night falls.

This is the Fountain of the Sun, in the oasis of Jupiter Ammon, in the Libyan desert, which has been frequently described, especially by the Latin poets.<sup>24</sup>

*XLVIII.*

The many chattering voices of the black men are described and their dumb or stammering words. Mela describes some of them as quite dumb, and using only the language of signs ; others who do not use their tongues ; others who have no tongues ; others whose lips are fastened together,<sup>25</sup> and other strange monstrosities, which appear to have been fully believed by the ancients.

Coming now to Part III., which treats of Europe, we learn, *XLIX.*, that it was named from Europa, who was carried off thither by Jupiter. Its north-east boundary is the river Tanais (Don). Now, with the earlier geographers the Phasis was the boundary, and we

<sup>23</sup> P. 240, note c.

<sup>24</sup> See p. 242, note f.

<sup>25</sup> P. 234, note.

have thus another indication here that in the main our author follows the later writers, though occasionally adopting the earlier views.

In the country from Constantinople along the south of the Danube he tells (LIII.) of many swift-winged things, by which the night is made bright. These I take to be fire-flies, as often described by the ancients.<sup>26</sup>

In the name of Thessaly, as given in the Book of Leinster, we have another of those curious linguistic changes I have mentioned. It appears as Cessair. The change of terminal *l* for *r* is common enough, but that from *th* to *c* is more difficult to explain, though there are instances of it; it may be due, however, to the similarity of *t* and *c* in some manuscripts.

Rome, verse lx., is not the Imperial city, but that, it would seem, of the Republic. It is the "politic city of the Romans." Our author occupies a standpoint outside the Empire, and speaks in quite a different tone from Dicuil, the Irish geographer who wrote on the continent, where the traditions of Imperial rule still survived.

He concludes with Ireland, the island of Eriu, the pleasant land of many jewels, where the sons of Milesius are known to fame, the land of many glorious branching stems, the most fruitful of known lands.

These observations by no means exhaust the interest of the poem, but I was obliged to omit a great deal, lest this Paper should run to too great a length.

To sum up briefly the evidence it affords as to the teaching of the Irish schools, I may state that the situations and boundaries of the different countries, as well as the rivers and mountains, are generally pretty accurately laid down, even in remote districts. The fauna mentioned are the elephant, tiger, panther, wild ass or zebra, bear, serpent, and unnamed African monsters, perhaps crocodiles, together with some fabulous animals. Of minerals and natural products, we have the diamond, pearl, carbuncle, the magnet, selenite or moonstone, amber, crystal, gold, asbestos, myrrh, frankincense, and silk, and by inference petroleum. And then a long list might be made out of the physical characteristics of the different territories and the idiosyncrasies of their inhabitants.

It has no mention of the Franks, who had been in Gaul for five hundred years, nor of the Saxons, who were in Britain for about the same time, nor of the Danes, who had been ravaging the coasts of Ireland for one hundred and fifty years, and whom the author had reason to be acquainted with: from this, and the absence of any Christian allusions, it would seem that it was intended as a classical geography, and did not profess to give the state of knowledge at the date of its composition.

It was evidently intended to be committed to memory, for which

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<sup>26</sup> P. 244, note o.

its metrical form was well adapted. There seems to be reason to believe that the author was acquainted with Greek. This may be inferred from his knowledge of Josephus and one or two Greek derivations which we find.<sup>27</sup> It is possible that these may have been taken from some mediæval compilation; but until this is proved it is fair to assume that they are from a Greek source. That Greek was studied in Ireland in that age is generally acknowledged; a well-known instance being that of John Scotus Erigena, who acquired sufficient knowledge of it to translate the pseudo-Dionysius the Areopagite, and another work.

On the whole, the geography gives reason to believe that the education in the school of Ros Ailithir was by no means to be despised, and when it is remembered that it was composed a hundred years before the battle of Hastings, and two hundred before the Anglo-Norman conquest, and in the darkest of all the Christian centuries in European history, it must be allowed to be very creditable to Ireland.

P.S.—I am indebted to several kind friends for assistance in these observations and in the notes—assistance the value of which they will best understand who write in the country, and at a distance from libraries: I should especially mention Mr. W. M. Hennessy, whose attainments as a scholar and linguist, especially in the department of Celtic literature, are well known. He has been very kind in allowing me to consult him about difficulties in the translation, and in many other ways has given me valuable help, for which I feel truly obliged. I have also to thank Professor Rhys, of Oxford, for a comparison of the copy in the Bodleian Library (Rawlinson, B. 502, fol. 45) with that of the Book of Leinster, and the various readings he has been kind enough to send me are those with the letter R affixed; those followed by L are from the Book of Leinster.

In Rawlinson the Irish is more archaic in form, and the names are nearer to the Latin; the metre also has been more carefully attended to; but on the other hand the writer appears to have been unacquainted with Greek, and to have attempted conjectural emendations (*see* xxxiv. and lvii., and notes). On the whole, the Book of Leinster appears to have the better text.

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<sup>27</sup> See p. 239, note 1, and the words *Αφep*, verse xxxiv., *λiβa*, verse xxxv., and *αββατες*, verse lvii.



## MAC COSSE FER LEGINO RUIS AILITHIR, CECINIT.

(IN FER LEGINO MAC CORRE, CECINIT, R.)

## I.

RIO FERPA 1-CHIR SOMUIN UIR: COIC CHEPPA CÁINE COMTHAIR<sup>1</sup>  
 UÁ UÁRUA CO-NGLAINE GHE. UÁ MEPPAIGTHE IM CHENCTOE.

## II.

CENCTOE UAR MEON CHIRP. CALMAN CENE NA CHOM-CHIRP<sup>2</sup>  
 UÁ UÁRUA IM IMMUL CÁIRO CEP. UÁ MEPPAIGTHE IMM-AN-POTEPP.

## III.

IM MEPPAIGTHE CHAIR RÓ NIM. IYÉ IF ACTREB UO BOEOMB  
 IYÉ RO VELIG UÁ UÁAN. 1-CHENADIB O MUIR CORRIAN.

## IV.

CHI RANNA IM SOMUIN CHAIR CHAIR. CHI RANNA ICÁE RIL AUAIM<sup>3</sup>  
 CHI RANNA RA<sup>4</sup> VELIG UÁ. EURAIR AFFRAIC IF ARIA.

## V.

AIRA IRMAIT<sup>5</sup> AR CAC LEC. ON RIGAIN<sup>6</sup> RO HANMNIGEO  
 AIRA BA H-AIIM UÍ<sup>7</sup> CHAIR. BEN RO GAB RIGE IMO-AIRCHIR.

## VI.

AIRA NI CEPIC CHAIR ACÍ. UAR AIRCHER IM MEPPAIGTHE  
 BEC NAC RUC<sup>8</sup> LETH LE N-A RLAIC. O EORAIR IF O AFFRAIC.

## VII.

ACHAIO ANAIR IF ANEPP. ACÁ IM MUIR IMMA MÓRCHERP  
 NO-R-VEOLANO RRUETH UANAI ANAIR. MUIR MÉOIC IF MUIR CORRIAN.

<sup>1</sup> CAIUI COMUIR, R.<sup>2</sup> CHOM INACHROMCHIRP, R.<sup>3</sup> ACHI HICAT RIL AUAIM, R.<sup>4</sup> RO, R.<sup>5</sup> IRMAIT, R.<sup>6</sup> O RIGAIN, R.<sup>7</sup> UÍ, R.<sup>8</sup> NARUC, R.

\* So Virgil:—

Quinque tenent cælum zonæ quarum una corusco  
 Semper sole rubens et torrida semper ab igni,  
 Quam circum extremæ dextra lævaque trahuntur  
 Cærulea glaciæ concretæ atque imbribus atris,  
 Munere concessæ divûm.

Georgics, i. 233-238.

## MAC COSSE, PRÆLECTOR OF ROS AILITHIR, CECINIT.

## I.

In the body of the firm world are known five<sup>a</sup> equal zones marked out ;  
Two frigid of bright aspect ; two temperate around a fiery.

## II.

The fiery across the middle of the body of the world ; [there is] fire in its solid mass ;  
Two frigid at the border north and south ; two temperate around the great heat.

## III.

The north temperate zone under heaven, there is the abode of mankind ;  
It is that which God divided for ever, in thirds<sup>b</sup> from the Torrian Sea.

## IV.

[There are] three parts of the world west and east ; three parts<sup>c</sup> in which are Adam's seed ;  
Three parts which God divided, Europe, Africa, and Asia.

## V.

Asia [is] very good on every side, from the Queen<sup>c</sup> it was named ;  
Asia was her name in the east, the woman who ruled over the eastern world.

## VI.

Asia [is] not insignificant ; in the east it is, across the eastern part of the temperate  
Almost half<sup>d</sup> [the zone] took she by force, from Europe and from Africa. [zone].

## VII.

On north, east, and south, the sea is round its great surface,  
Which the river Tanais (Don) bounds on the west, the Sea of Mæotis<sup>e</sup> and the Torrian  
Sea.

<sup>b</sup> *Thirds*.—Pomponius Mela, regarding the Euxine as a bay of the Mediterranean, says: Hoc mari et duobus inclytis amnibus Tanai atque Nilo in tres partes universa dividitur, lib. i. cap. 1.

<sup>c</sup> *Queen*.—Asia, daughter of Oceanus.

<sup>d</sup> *Half*.—Strabo says Europe and Africa together are not equal in size to Asia, xviii. 3. 1.

<sup>e</sup> In the time of Herodotus the Palus Mæotis (Sea of Azov) was considered not much smaller than the Euxine, and it was believed to occupy a position to the east of that sea. This explains its relative position to Armenia in xxvii. Part of the Euxine is termed the Pontic Sea (LIII.), and the whole sea seems to be called the

## VIII.

τορραδ πο φαμλur οι εαιρ. εη ιραιλ παρτουρ αοαιμ  
εη ιν ναε ελcen εηρ fleo. εη ιmm-ocά μύρ ceneo.

## IX.

ον εηρ ρη co-rruε n-ιno ράρ. ιno-ιnoία con-α-mop μιάo  
αcuάιo o φλέιb ευcaιpcaιn. co munceno μαρa ρομαιρ.

## X.

Ro περτ α-mμαιε αr caε αιρo. α μάcνειc, α h-αοαμαιnc  
α μαρcαpείc α h-υρ ιnoρ.<sup>9</sup> α h-όρ ιr α caρpμocoλ.

## XI.

α h-oenbennac πεpcaιcηαίc.<sup>10</sup> α cαεε cεcαμαιλ φηp-βλáiε<sup>11</sup>  
α helιpαιnc<sup>12</sup> com-bpíc-bιλ. α-bbέaιn φαoό<sup>13</sup> ιn-oenβλiaoάιn.

## XII.

παρci ιr αpπαρoαι αpσoα. πεpρai ιr μεoα mopcάpγa<sup>14</sup>  
o ιno pάp pαιcιc na ρηp.<sup>15</sup> co cuιno cpeбайρ cρom-ειcιp.

## XIII.

o μuιp pυαo pαcαιo oαρ pέ. po ευάιo<sup>16</sup> co εηρ apcáne  
ιp-ι-εηρ ρη no oάλ oιp. αca ιn λia<sup>17</sup> pλιncειp.

## XIV.

αpάιb co μuιp co cύιp εαιρ. co φαenic ιn mop pάcαιλ  
o h-όcραιλ ρομuιp cρén cρicc. o ειcιp co ppuε n-ευpραιc.

## XV.

caλoeι ιr babιloιn baιlc. ecep ιnn-αpάιb apoαιc<sup>18</sup>  
αcυρ μαc pennaιp po ευάιo. ιn-οepηαo ιn cop neβpάiao.<sup>19</sup>

<sup>9</sup> ιpa μαρcνειc φοpαhoρ, R.

<sup>10</sup> φοpcoεcηαίc, R.

<sup>11</sup> αcαεε cεcαμαιλ φηpβλáiε, R.

<sup>12</sup> α helιpαιnc, R.

<sup>13</sup> φαoό, R.

<sup>14</sup> πεpρai ιr μεoα μινcαpγa, R.

<sup>15</sup> όιnn pαρ pεcαιc ιno ρηp, R.

<sup>16</sup> pεcαιc απe. pυ cuαιo, R.

<sup>17</sup> ηι oάλoιp. αca ιn λia, R.

<sup>18</sup> naρoαιc, R.

<sup>19</sup> φοpρh-οepηαo ιn cop neppυαιo, R.

Cimerian Sea (*in Cimer muir*) throughout this geography (see xxix.). It is curious that one of the Irish Saints (Colman) was known as the "Cimerian wanderer."

The Torrian Sea is the name by which the Mediterranean was known to the Irish. The Mare Tyrrhenum was originally the sea to the west of Italy, but gradually came to have a more extended meaning.

<sup>1</sup> This is apparently taken from Tertullian: Et si Paradisum nominemus locum divinæ amenitatis recipiendis sanctorum spiritibus destinatum, maceria quadam igneæ illius zonæ a notitia orbis communis segregatum.—Tertull. *Apol.*, cap. 47.

<sup>2</sup> *Unicorns of fierce habit*.—"Atrocissimus est monoceros"—Dicuil. The epithet *Fercaignaith* seems a compound of *Fercach*, wrathful, and *gnath*, habit. The Oxford copy has *Forcoegnath*, of usual habit.

## VIII.

Its beginning seems to be in the east, the land wherein is the paradise<sup>f</sup> of Adam ;  
The land where one need not prepare a feast ; the land around which is a wall of fire.

## IX.

From that land to the river Indus westward [is] India great and proud ;  
From the north, from the Hindoo Coosh, to the strait of the Mare rubrum.

## X.

Known is its excellence on every side, its magnets and its diamonds ;  
Its pearls, its gold dust, its gold and its carbuncles.

## XI.

Its unicorns of fierce habits, its soft and balmy breezes ;  
Its elephants of mighty strength, its two harvests in one year.

## XII.

Parthians and highland Assyrians, Persians and very fierce Medes ;  
From Indus westward reach the men, to the profitable waters of the deep Tigris.

## XIII.

From the Red Sea<sup>h</sup> they reach across the plain, under the north to the land of Arcæne.  
In that land, no poor lot, is the stone Selenite.

## XIV.

Arabia with myrrh and frankincense in the east, with the phoenix of great age ;  
From the angle<sup>i</sup> of the Mare rubrum, powerful, swift ; from Tigris and river  
Euphrates.

## XV.

Chaldea and Babylon the strong, are conspicuous between Arabia  
And the plain of Shinar<sup>j</sup> northward, wherein was built Nimrod's tower.

<sup>h</sup> *Red Sea*.—*Muir ruadh*, i.e. the Indian Ocean : this is the vernacular term : the other expression for it, vs. 9, 14, 20, is *romair* ; the Latin *rubrum*. The Persian Gulf and the Arabian Gulf with its branches were termed the Red Sea, being regarded as inlets of the Indian Ocean. In a poem of Gilla Coemain, Book of Leinster, 130*b*., the two expressions are combined, *tarmthecht mara ruaid romair*, "the crossing of the Red Sea." The latter name, however, when used alone, is ambiguous, as it may also signify "the Great Sea" : cf. the *Calendar of Oengus*, by Stokes : Index.

*Arcæne*.—This description corresponds better with *Carmania* than any other country. It is now the province of Oman, and the east part of Hadramant. It is a desert plateau with a ring of mountains round the coast. The crystallized gypsum or moonstone was used for glazing windows. Pliny's account of the name is, *Σελήνιτην* dictum vult Dioscorid, non quod imaginem Lunæ contineat sed quod adlucente Luna, ἐν τῇ τῆς σελήνης παρυφεί media nocte ac intempesta reperitur, 37, 10 (67).

<sup>i</sup> The angle formed by the Gulf of Oman and the Persian Gulf. "In Persico sinu maris rubri."—Pliny, lib. ix. 106.

<sup>j</sup> The plain of Shinar is one of the favourite places of the Irish Bards ; and Nim-

## XVI.

ni h-aipe acat cair na fir.<sup>20</sup> eceir eufraic ir cighir  
 aghur caucair<sup>21</sup> feib ar lia. ir<sup>22</sup> cuada meoporotamia.

## XVII.

Siria fir eufraic aniar. co mochor maria corrian  
 o egipt peite a foute. fo cuado cor-in Capadocia.

## XVIII.

fir magena acudao a erien.<sup>23</sup> fir capadocia fir h-armein  
 faenicia rintar irur. inn-er inna com-focur.<sup>24</sup>

## XIX.

Palestina<sup>25</sup> con-a glair. anu rin acat mic iacoib  
 nabachir firu an-veir co cenno. ir cuada na fairceno.

## XX.

Soudomada<sup>26</sup> o fair rinar nac<sup>27</sup> rlan. amalec ammon modb  
 Seir<sup>28</sup> ciar ir maoidan cair. coeb ri<sup>29</sup> coeb ir muir romuir.

## XXI.

inu egipt congairne gnim.<sup>30</sup> ir corcecu cac veighir<sup>31</sup>  
 illeat ri rinuch nil fo veir.<sup>32</sup> fir afraic a comarocheir.<sup>33</sup>

## XXII.

o flear cucair fair fo cuait. fir h-or inn-ocuin<sup>34</sup> inn-uair  
 ni h-aipe acat fair na fer. o muir cairp cuir-inn-aipeir.

<sup>20</sup> inu fir, R.

<sup>21</sup> cucair, L.

<sup>22</sup> omit, R.

<sup>23</sup> fir (sic) magina cuado co erien, R.

<sup>24</sup> an aer ina h-acfocur, L.

<sup>25</sup> palestina cur in glair.

<sup>26</sup> soudoma, R.

<sup>27</sup> ni, R.

<sup>28</sup> Seir, L.

<sup>29</sup> fir, R.

<sup>30</sup> inu egipt congairne agnim, R.

<sup>31</sup> noveighir, R.

<sup>32</sup> fauer, R.

<sup>33</sup> uono afraic a comaitcheir, R.

<sup>34</sup> co h-or inn-aceoin, R.

rod's connexion with the tower was an accepted fact. It has been observed that *Nebrad* (in the Irish *Nebrud*), as in this poem, is the form of the name in Josephus and the Septuagint: *χους δε ενενησε τον Nebrad. ουτος ηρξατο εινα γιγας ειη της γης*.—Genesis, x. 8 (Sept.) Compare the following from a poem of Gilla Coemmain:—

oá céit bliadan co mbuad  
 co meic tuir n-oiúg nebrudao.

Two hundred victorious years  
 To the confusion of giant Nebrud's Tower.

*Book of Leinster*, 130  $\frac{b}{36}$

XVI.

Without doubt, in the east are the men, between Euphrates and Tigris,  
And Caucasus, where it is greatest, and the tribes of Mesopotamia.

XVII.

Syria, towards Euphrates from the west, to the dark places of the Torrian Sea ;  
From Egypt its length is seen, northward to Cappadocia.

XVIII.

Towards Magena (Commagene ?), on the north its strength ; towards Cappadocia,  
towards Armenia ;  
Phœnicia is known here, on the south<sup>1</sup> in its neighbourhood.

XIX.

Palestina, the glorious [land], there are the sons of Jacob ;  
To the south the vigorous Nabatheans, and the lands of the Saracens<sup>1</sup>.

XX.

The people of Sodom, thence westward, not healthful : Amalek, Ammon, and Moab ;  
Seir west and Midian east on either side of the Mare rubrum.<sup>2</sup>

XXI.

Egypt of famous deeds, most fertile of all lands ;  
Along by the river Nile southward, it is neighbour to Africa.<sup>3</sup>

XXII.

From Mount Caucasus east by north, by the shore of the Arctic Ocean ;  
Without doubt there is a multitude of men, from the Caspian Sea to eastward.

It is singular that Bacchus was also called *Νεβρώδες*, and this name was supposed to have been derived from *Νεβρίς*, the skin of the hind, which the Bacchantes used. But another tradition identifies him with Nimrod : "Nimrod Græcorum Bacchus Arabum desertis in amœnissimos Babylonis progressus cum vires suas circumspiceret ejus urbis imperium rapuit ac brevi magnum Regnum conflavit."—Hoffman's *Lexicon Univer.* s. v., Nimrod.

<sup>1</sup> The Book of Leinster reads *an aca*, which does not make sense. Probably the true reading is *inn-aca*, i.e. the ships, alluding to the Phœnician commerce.

<sup>2</sup> *Saracens*.—They are mentioned at a very early period by Ammianus Marcellinus, lib. xiv. cap. 4. Menander describes them as very numerous : *Σαρακηνικά φυλά μυριάδες ταῦτα καὶ τὸ πλεῖστον αὐτῶν ἐρημογόμοι καὶ ἀδασκτοί*.—*Excerpta Legat.* p. 149.

*Nabatheans*.—The Greeks and Romans called the inhabitants of the country, whose capital was Petra, by this name.

= *Red Sea*.—Here the Euxine Gulf.

= *Africa*.—Egypt it will be observed is treated as part of Asia, the Nile dividing it from Africa.—v. III., note *b*, p. 231.



XXIII.

In that eastern land of many deeds are the Seres [Chinese] of ancient fame ;  
For there are woods there, whence, no wonder [comes], their wool.\*

XXIV.

Bactria and Dahæ are known in the north ; they adjoin Scythia :  
In Scythia are griffins<sup>p</sup> of the valley, guarding gold and bright gems.

XXV.

Thence south-west around the head of the Caspian is Hyrcania, without doubt ;  
Land where are tigers<sup>s</sup> swift and fierce, and brown panthers.

XXVI.

Land of Alaunia<sup>r</sup> [where is], a burning fire ; from the Caspian Sea to the [palus] Mæotis ;  
Known are their tribes in west and east, a fair-haired people.

XXVII.

Iberia, on the shore of the famous Caspian Sea, between Armenia and Albania ;  
Mæotis by Armenia on the west, its vicinity is not very far.

XXVIII.

Pentisilia<sup>s</sup> in the north without deceit, between the External sea  
And Albania of fierce aspect, and the land of the Amazons.

XXIX.

The Colchians, who are by Albania, between it and the Cimerian Sea ;  
The Cimerian Sea, which meets at the south flowery Little Asia.<sup>t</sup>

a cheveux blonds dans l'Asie Centrale, A Lan, ou A Lan Na dans le seconde  
siecle avant Jesus Christ ce sont les Alains."—Notes to the Atlas of *Asia Poly-*  
*glotta*. They originally occupied the deserts of Scythia ; but when defeated by  
the Huns, a colony of them took refuge in the Caucasus.

*A burning fire*.—The "ager ardens" or burning plain, near Baku on the  
Caspian : see p. 223. The latest account of it is to be found in O'Donovan's *Merv*.

\* *Pentisilia*.—I have been unable to discover any country answering to this  
description. The Book of Leinster has *Pentisiria*. The Amazons are always known  
by Irish writers as the *Cichlosæthe*, or "Burnt-breasts." The origin of this name  
is explained by Mela : "Sarmatia . . . usque eò immanis atque atrox ut fæminæ  
etiam cum viris bella ineant : atque ut habiles sint natis statim dextra adurit  
mamma"—lib. iii. cap. iv. § 10. We have them associated with Pentisailia, as here,  
in another passage of the Book of Leinster :—

RUCAD CUP NA CÍCLORCÉIB IAP N-ANĠAM TĠPÍ SĠPÍÁ  
Ro maṛb tĠpí éét céṛpaṛṛat ve fluaḡ Pentasailia.

Who invaded the Amazons after plundering Syria ;  
Who slew 12000 of the host of Pentasailia (Penthesilea ?).

P. 44, <sup>a</sup>  
22-23.

<sup>t</sup> The Irish did not speak of Asia Minor, but of "Asia the Little" ; so the Germans,  
*klein-asien*.



## XXX.

in aḡḡia bec feḡic áicc. beḡain fḡuḡia li<sup>48</sup> ḡálaic  
phílir lícia tḡoe com-bláio.<sup>49</sup> iḡuḡia pḡria pampil.<sup>50</sup>

## XXXI.

capaóóic ríá aḡaír n<sup>o</sup> uḡḡ. ríá aḡaír<sup>51</sup> muir pḡopontuoir  
ríá neḡḡ á ciméir<sup>52</sup> á-ḡluair á-ḡlé. connice in muir n-áigḡoe.<sup>53</sup>

## XXXII.

ceḡḡáir aḡ huḡ maḡa éig.<sup>54</sup> ḡermáin uáó ríáir ríá ḡlan-réir.  
ó ḡermáin ríáir coḡ-in-muir. ríóon éon-á-comaḡuóicb.

## XXXIII.

ḡabḡac oḡ in maḡa móir. cuḡ-inn-ḡḡiḡc ó ríóóin  
aḡaír noco-éle óá cuḡḡ.<sup>55</sup> cuáéá óe beic<sup>56</sup> im<sup>57</sup> roḡḡ.

Ruḡḡḡa.<sup>58</sup>

## XXXIV.

áḡḡer uó ríá áinn fḡia ríá. mac uó éḡuair iḡ uó ábráim<sup>59</sup>  
uonó-áḡḡaíá á cuimne cneó. ó cléḡia ríó h-aḡmḡiḡeo.<sup>60</sup>

## XXXV.

áinn uí líbia ó-n ḡáicé<sup>61</sup> ḡuḡu. ná óá-ríclenó co-h-in ríuó<sup>62</sup>  
nó ó-n<sup>63</sup> macáir ḡuḡénnó ḡle, áḡenóir<sup>64</sup> ríḡ áḡḡaice.

<sup>48</sup> líc, L.<sup>49</sup> combaíl, R.<sup>50</sup> pílir, L.<sup>51</sup> aḡoir, L.<sup>52</sup> in cimuir, R.<sup>53</sup> connice in muir n-ḡḡiḡc.<sup>54</sup> h-éig, L.<sup>55</sup> aḡuair nó cochlé uia cuḡḡ, R.<sup>56</sup> beic, R.<sup>57</sup> in L.<sup>58</sup> R., L.<sup>59</sup> ríáráó. huá uó cheḡeóir iḡ  
uábrám .i. áḡḡer mac maḡaíá  
míc ábrám, R.<sup>60</sup> áḡ cúimne cneó. nó ochlíclhna  
ríoáinnneó, R.<sup>61</sup> ḡáicé, R.<sup>62</sup> cohimḡuinn, R.<sup>63</sup> nó iḡ on, R.<sup>64</sup> áḡena, L.

<sup>48</sup> If not Caria, this may be Parium on the Propontis. According to Pausanias, ix. 27, § 1, a colony of Parians from the Island of Paros settled there.

<sup>53</sup> In ancient maps the line from the Bosphorus to the Hellespont runs from N.-E. to S.-W. nearly.

<sup>54</sup> *Pure heights*: *ria glan réir* (cf. réar, réarádh, O'Reilly). Professor Rhys has been good enough to communicate to me the opinion of Dr. Neubauer and his own, that Cessáir is Cæsarea in Cappadocia, and that *sig* is a mistake for Mount Argæus, near which it stood. This suggestion seems to have several difficulties; one of which is its situation, which is quite in another direction from that given in the poem; but the reader will exercise his own judgment. See p. 225.

<sup>58</sup> *Knowledge*.—"The great knowledge" would appear to be the Divine Revelation given to the Israelites. The ancient Irish worshipped the Dagda, or Beneficent Deity, whose title was "Lord of the Great Knowledge" (*Ruad Rofhessa*); and it

xxx.

In Little Asia are seen these places: Bithynia, Phrygia, Lydia, Galatia; Paphlagonia, Lycia, famous Troy, Isauria, Paria,<sup>u</sup> Pamphylia.

xxxi.

Cappadocia at the east not small; at the west<sup>v</sup> the sea of Propontis, [Which extends] south from Cimér of bright fame, to the Ægean Sea.

xxxii.

Cesair on the shore of the Sea of Egi,<sup>w</sup> Germain west from it with pure heights, From Germain west to the sea; Sidon with its neighbour towns.

xxxiii.

The tribes of God who have the great knowledge,<sup>x</sup> not hidden is their extant in the east,

Took possession of the shore of the great sea, from Sidon to Egypt.

Are known, &c.

xxxiv.

It was Apher, son<sup>y</sup> of Keturah and Abraham, who gave his name to Africa, As an appellation, in memory of his wounds. From [carrying] a wallet he was named.

xxxv.

Its name of Libya<sup>z</sup> [comes] from the pleasant brook which trickles to the headland, Or from the pure sweet-voiced mother of Agenor, king of Africa.

would seem that they transferred this term (*rophia*) in Christian times to the Old Testament.

*Great Sea.*—The Jewish name for the Levant.—Numbers, xxxiv. 6.

<sup>y</sup> We have evidence here that the copyist of the Oxford ms. made conjectural emendations of the text. Not finding in the Bible any son of Abraham called Apher, he alters the text, and substitutes a grandson of Abraham (Gen. xxv. 4). He was not aware that Mac Coese followed Josephus, who quotes authorities as to Abraham having had a son named Apher, and assigns the same cause for the name of Africa:

Ἀφρὴν στρατεύσας ἐπὶ τὴν Λιβυήν  
κατέσχευεν αὐτήν· καὶ οἱ υἱοὶ αὐτοῦ  
κατοικήσαντες ἐν αὐτῇ τὴν γῆν ἀπο τοῦ  
ἐκείνου ὀνόματος Ἀφρικαν προσηγόρευσαν.

*Antiq.*, B. 1, ch. xv.

It is worth noticing that the Oxford copy, by adding *no* (or) before *o elithra*, shows that the copyist did not understand his author, who meant to convey that Apher derived his name from *φέρω*, because "he carried" a wallet. It is not an alternative explanation, as he makes it; but he was apparently unacquainted with Greek.

<sup>z</sup> *Libya.*—From *λίβας*, a trickling stream, irregular accusative, *λίβα*. This seems an instance of *Volkeetymologie*, originating with the Greek inhabitants of North Africa.



XXXVI.

The ocean is on the east along its extent, on the south-east towards Ethiopia,  
And on the south and west. And on the north [is] the Torrian Sea.

XXXVII.

And on the north-east the river Nile, and goodly Egypt of great culture ;  
Along by Egypt after an interval, the gentle Libya Cirinensis.

XXXVIII.

In Pentapolis<sup>b</sup> the trogodytes are seen, opposite the junction of the Adriatic Sea,  
From the Syrtis major southward, direct to Ethiopia.

XXXIX.

From Syrtis major westward, by the shore of the sea to the [Atlantic] Ocean  
Are Tripolitana, not insignificant, Byzacium, and Zeugis.

XL.

Numidia with daring valour, [and] Mauretania-Tingitana ;  
Its length is southward and northward, in noble Africa of lofty splendour.

XLI.

A river<sup>c</sup> flows across Africa from the west, from Mount Atlas and the ocean ;  
Dara [is] its name at its source, but in the east its name is Nuchul.

XLII.

It flows in the east underground for a space, amongst the learned Egyptians ;  
Nile [is] its name from Cammus<sup>d</sup> westward, till it reaches the Torrian Sea.

between the Daradus, the Niger, and the Nile. The name Nuchul (Niger?) here is found elsewhere in the Book of Leinster :

ἔξεργασαὶ ἡμ ἥνυτ ἡλ n-ἰαρ : σο ἐλάνναῖβ μετῆραιμ μῖς Καίμ  
οὐά ἥνυτ Nuchul ἀνεγ : σο μῦρ Τορριαν να τρομ-τρετ.

142 A.

The Egyptians, on the west, by the river Nile,  
Of the race of Misraim, son of Ham ;  
From the river Nuchul northward  
To the Mediterranean Sea.

Mela regarded the name as a corruption of the word Nile : " In Æthiopium finibus fons est, quem Nili esse aliquā credibile est. Nichul ab incolis dicitur : et videri potest non alio nomine appellari, sed a barbaro ore corruptus."—Lib. III. i. 3.

<sup>d</sup> *Cammus*.—This would appear to be either *cambus*, "the bend" of the Nile, or perhaps the Latin *campos*, which in Irish pronunciation drops the *p*. The following illustrates the text : " Dyris qui ortus ex septentrionali regione progreditur per occidentem ad lacum Heptabolum et mutato nomine dicitur Niger. . . . pervenit in Ægypti campos et ibi Nilus appellatur."—Vitruvius, lib. VIII. cap. ii. p. 183 : Berolini, 1880.

*Mount Hesperium*.—Cape de Verde.

## XLIII.

ճ-ն շրթս լին քո յեղբ ԿՈ-Մ-ՄԱՐԻ. ԵՐՈՅԻՐ ԻՆ-ՍԱՃԱ ՍԵՐԵ-ՍԱԻԲ  
ՍԱՐ ՍԵՐՇԱՐԵ Ո-ԱՐՔԱՐԱՅԵ ՄՈՍ-ԱՐԻՍ. ԿՈ-ՐԼԻԱԲ Ո-ՆՐԵՐ ԻՐ ԱՆԼԱՅԻՆԵ.

## XLIV.

ԻՐ յո<sup>77</sup> յրթս աղբ ԲԵՃ. ԵՐՈՅԻՐ ԱՐ Ե ԵԻՆ ԼԱՆԼԱ  
ՏԵ ԵՐ ԵՐՈ ԵԻՆ Օ-Ն ՄԱՐԻ.<sup>78</sup> Օ ԼԱՅԵԱՐ ՄՈՍ-ՔԻՐԱՍԱՅ.<sup>79</sup>

## XLV.

ԻՐ յո յրթս ԲԵՃԱՅՈՒ<sup>80</sup> ԲԵՃ ԵՐ. ԵՐԵ ՐԼԵԲԻ ԱՐԱՐՇԻՆ<sup>81</sup>  
ԵՐ Ո-ՈՆԱՅՐԻ ԻՐ ԶԱԵՄ ԿՈ-ՄԼԱՅ.<sup>82</sup> ԵՐ ՆԱՇՐԱՃ ԻՐ ՕԵՆԵՆՈՆԱՃ.

## XLVI.

ԻՆ ԵՐ լին ԵԻՆ ԵԻՆ ՍԻՃ ԵԻՆ ԲԱՇ. ԻՐ ԵՐ ՆԱՇՐԱՃ Ե ՍԵՐՈՐԱՅ<sup>83</sup>  
ԱՇՐ ՈՆԱ ԵԱՐԱՇ<sup>84</sup> ԿՈՐՔԱՅ ԵԱՆ. ԵՐ ԼՈՄՈՆԱ ՍԵ ԵՐԱՇՐԱԻԲ.

## XLVII.

ԻՆ ՄԻՐ ՕՃԱ ՐԼԻԱԲ ԲՈ ՍԵՐ. ՍՈՍՈ-ԱՐՔԱՐԱՅ ԱՐ ՈՍ-ԵՐԵՐ  
ՈՒ Ի-ՄՈՍԱ Ա ԲԼԱՇ ԵԻ ԲԵ ԱՇՇԵՇ. Օ ՐԼԵԲ ԲՈ ԵՃԱՅ ԵՐ ԵՐՇԵՇ.

## XLVIII.

ԵՐ ՔԵՐ ԻՆ-ՍՈՍ ԿՈ-Ն-ՄՈՄՍՈ ԶԼՈՐ. ԵՐ ԵՆ ԱՆՈՄՆԵ ԵՆ ՕՆՈՐ<sup>85</sup>  
ԿՈՆ ԲՐԵՇՐ ԵԱԻԲ ԵԱՇԱՇԵՐ.<sup>86</sup> ԵՐ ՍԱ<sup>87</sup> ԵԱՐԱՇ ԱՆՈՄ ԱՐԵՐ. .Ճ.

## XLIX.

ԵՐԱՐԻ ԵԼԱՐԵԱ<sup>88</sup> ԿՈ-ՄԼԱՅ. ԻՆՅԵՆ ԶԱՐԵԱ<sup>89</sup> ԱՅԵՈՐԵՐ  
ԱՐԻՄ ԿՐՐՄ-ՐԱՇԱՅ Ի-ՐԼԱՅԵ. ԻՐ ԵՐ ԱՆՈՄ<sup>90</sup> ՍՈՍՈ-ԵՐԱՐԻ.

## L.

ՄԱՐԻ ԻՆԱ-ԵՐՄԵԼԼ ՈՍ ՔԵՐ. ԱՇԱՅՈՒ ԱՆԻԱՐ ԱՆԻԱՐՍԵՐ  
ԱՆԵՐ ԱՆԱՐ ՈՒ ՆԱՐՈՄ ՐԱՅԻԼ.<sup>91</sup> Ե ՐԻՍԵ ՍԱՆՈԵ<sup>92</sup> ԱՆԱՐԵԱՅՈՒ.

<sup>77</sup> ՐԻ, R.

<sup>78</sup> ԻՐԵ ԵՐ ԵՐՇԻԱՆ ՕՄԱՐԻ, R.

<sup>79</sup> ԻՆՍՐԻՅԵՐ, R.

<sup>80</sup> Օ ՐԻՍԻՐ ՔՈՇՄԱՅ, R.

<sup>81</sup> ԱՐԱՇԻՆ, R.

<sup>82</sup> ՆԱՆԱՅՐԵ ԻՐ ԶԵՄՄ ԿՈՍՈՇԱՇ, R.

<sup>83</sup> ՍՈՍՈՐԱՅ, R.

<sup>84</sup> ՆԱՇՇԱՐԱՇ, R.

<sup>85</sup> ԿՈՆ ԱՆԲԼԵ ԻՐ ԿՈՆ ԵՐՈՐ, R.

<sup>86</sup> ԵՐՇԻ ԱՇՇԵՐ, R.

<sup>87</sup> ՍԻՃ, R.

<sup>88</sup> ԵՐՈՐԱ ԲՐԱՐԵԱ, R.

<sup>89</sup> ԱՐԵԱ, R.

<sup>90</sup> ԿՈՐԱՇԱՇԱՅ ԻՐ ԻՐԼԱՅ. ՍՈ ՐԱՇ Ա  
ԱՆՈՄ, R.

<sup>91</sup> ԱՆԱՐԻՄ ՆԱՐՈՄ ՐԱՅԻԼ, R.

<sup>92</sup> ՍԱՆԱՅ, R.

\* Strabo describes Africa as forming a right-angled triangle, one side being the distance from Egypt to the pillars of Hercules, the other side the line of the Nile to the extremity of Ethiopia, and the hypotenuse being the line connecting that point with the Pillars of Hercules. According to Juba the Atlantic Ocean began at the Moeslyan promontory, near the S.-E. extremity of the Red Sea.

<sup>†</sup> Fountain.—The “Fons Solis” in the Oasis of Siwah, near the Temple of Jupiter Ammon. Of this Lucretius says:

XLIII.

From that river southward to the sea is Ethiopia of deep-black colour,  
Across the south of lofty Africa, to Mount Hesperium and Atlas.\*

XLIV.

By the river to the south there is a fountain<sup>†</sup> that is cold when full day comes ;  
It is hot, though far from the sea, from the time that full night falls.

XLV.

By the river on the north is the land, wherein are the mountains Arascins<sup>‡</sup> ;  
Land of wild asses<sup>§</sup> and famous gems ; land of serpents and unicorns.

XLVI.

That land whoever visits in its length is a land of serpents and fierce dragons ;  
A people that love not gentle converse ; a desert land of monsters.

XLVII.

The part from the mountain southward, of Africa in the great heat,  
Has few blossoms to see ; [but] from the mountain northward it is a fertile soil.<sup>1</sup>

XLVIII.

Land of chattering black men ; land without patience—without honour ;  
With stammering words<sup>‡</sup> wherever one argues<sup>§</sup> ; land to which Apher gave his name.  
Apher, &c.

XLIX.

Europa, charming, famous, the brave daughter of Agenor ;  
It was she gave her name to Europe, the place to which she was carried by force.

L.

The sea surrounds it, as is known, on north, on west, and on south-west ;  
On south and east no weak covenant ; and the river Tanais on the north-east.

Est apud Hammonis fanum fons, luce diurna

Frigidus, at calidus nocturno tempore fertur.

Lib. vi. 848.

Ovid also: "Unda die gelida est, ortuque obituque calescit,"

Met. xv. 310.

See Curtius, lib. iii. ; Pliny, lib. ii. cap. 103 ; Mela, lib. i. viii.

\* *Arascins*.—This seems to be Mount Aurasius, "the citadel, and at the same time the garden of Numidia. That range of hills, a branch of the Great Atlas, contains, within a circumference of 120 miles, a rare variety of soil and climate."—Gibbon, *Decl. and Fall*, vii. 201 (Ed. 1806).

† *Wild Asses*.—The true Onager or wild ass is indigenous to north-east Africa.

‡ This stanza is wanting in the Oxford copy.

§ *Stammering words*.—"Sunt autem trans ea quæ modo deserta diximus muti populi et quibus pro eloquio nutus est : alii sine sono linguæ, alii sine linguis alii labris etiam coherrentibus," &c.—Mela, iii. xv. 29. This part of the Geography ends here, as the letter A indicates, that being the initial of No. xxxiv., the verse with which it began.

† *Cátacer*.—*Cá*, and *tacraim*, *tacra*, to argue or discuss.

## LI.

[ῥοιχία να ἡ-αιρητιον τυατο ταιρ. ις ῥρυτὴ ὠανοε co-morimuir  
 ὠανυὺς νια νεϋρ ῥαιρ να ὠαίλ. νια ἀνοαρ ῥρυτ ρειν ιμ ἑριμαιν.]

## LII.

ιρην πο ἐλυνιμ<sup>93</sup> ἀδὲ ὠα. ιche<sup>94</sup> τυατὰ να ῥοιχία  
 ἐλδαιμ<sup>95</sup> ὠατὰ ἑοτὰ<sup>96</sup> ἑίρ. ἑριμαιν εἰαρ ις ῥρυτ ἀρηορίν.<sup>97</sup>

## LIII.

εῤατὰ μεῖρα παννοιν ρέιτ. ῥιαρ co ῥρυτ ρέιν ἀρ μορ μέιτ  
 τοεβ ῥα<sup>98</sup> τοέβ ὠο νεϋρ ὠανυὺς. ὁ ἐρητταντοιν ο-η ροντ μυρ.

## LIV.

εἰρ ιῤαίλ ματῆαμαιν μαίλ. ιmmao ῥυουιν<sup>99</sup> ιρ εῤιτελλ  
 ιmmao [να] n-εττεε<sup>100</sup> co εῤις. ο εἰς ἀῤαῖς ρολλῆγῖτ.

## LV.

ἑρηε ο εῤατὰ ρεῖβ ιρ<sup>101</sup> λια. ῥα νεϋρ co μυρ κεῤαλία<sup>102</sup>  
 co ῥρυτ ρέιν ιρεο ἀτῆατ. ῥιαρ ρεδ ριου μαῤα ἀρηιατ.

## LVI.

ἀτταῖσι δ ἡ-αιρητη<sup>103</sup> εἰαρ. τυατὴ μόρ ῥαίλ<sup>104</sup> ιmm-on ἀτῖν  
 ἀτῖν νια ἀνοεϋρ ιῤιρ. ὠανι<sup>105</sup> εατῖρ κοῤινητῖρ.

## LVII.

ιμ ἀρῆαυ νια ἀναῖρ νι εῤιρτ. ιτὰ εἰοδ ὠαν ἀιnm ἀρβετ<sup>106</sup>  
 ο να-ῤ-ἑοῖβ τεne εῤι βρυτ.<sup>107</sup> νοδo-n-εταρ<sup>108</sup> δ ὠίβοῶ.

<sup>93</sup> ιτchλυνιμ, R.

<sup>94</sup> ἀτε, L.

<sup>95</sup> ἀλδαιμ, R.

<sup>96</sup> ἑοτὰ, R.

<sup>97</sup> ις ῥρυτῆαορην, R.

<sup>98</sup> ῥρῖ, R.

<sup>99</sup> ῥυουιν, R.

<sup>100</sup> ιmmao nen ιιττεch, R.

<sup>101</sup> ἀῤία, R.

<sup>102</sup> κεῤαλία, L.

<sup>103</sup> ἀττις ιmna ἡαιρητιον, R.

<sup>104</sup> ῥίλ, R.

<sup>105</sup> ὠαν, L.

<sup>106</sup> ῥίλ εἰοδ ὠανι ἀιnm ἀρβεῖτ vel  
 ροῤεῖτ, R.

<sup>107</sup> ἀῤα βρυτ, R.

<sup>108</sup> noconῆταρ.

<sup>1</sup> This stanza is added from the Oxford ms.

<sup>2</sup> Elimasa in Macedonia, on the frontiers of Epirus and Thessaly. The account of Scythia given here is nearly that of Herodotus, and differs altogether from that of the writers of the Roman Empire, with whom it means the north of Asia, from the Volga to China.

<sup>3</sup> Constantinople.—In the original the name is shortened to Constantin, according to the Irish fashion of cutting off the termination of long words: cf. Nabucodon for Nebuchadnezzar.—*Calendar of Oengus*, p. lxxvi.

<sup>4</sup> Winged things.—The Lampyris Italica (?). "This species is very abundant throughout the southern parts of Europe, particularly in Italy, where it is named Lucciola. The light is not constant, but has a kind of scintillating appearance

LI.

[Scythia has its territory in the north-east; it lies along the Tanais up to the Great Sea; On the south is the Danube with an eastward course; on the west the river Rhine enclosing Germany.]<sup>1</sup>

LII.

I hear every day that in it are the territories of Scythia.  
Elimea<sup>m</sup>, Dacia, Gothia keen, Germania west, by the stream of lofty Rhine.

LIII.

Thracia, Moesia, smooth Pannonia, westward to mighty river Rhine,  
[Lie] side by side south of the Danube, from Constantinople<sup>n</sup> and the Pontic Sea.

LIV.

Land in which are sluggish bears, much amber, and crystal,  
And [many] swift-winged things<sup>o</sup> which illuminate the night.

LV.

Greece [is] from Thracia in its greatest extent; southward to the sea of Cephalonia;  
To the river Rhine, which is seen to the west beyond the point of the Adriatic Sea.

LVI.

The territory of Attica is in the east, the great country which contains Athens;  
Achaia is on the south, to which belongs the city of Corinth.

LVII.

Arcadia, without question, is in the east; in it is the stone called Asbestos,<sup>p</sup>  
Since fire affects not its mass, nor is it found to be extinguished.

recurring at every other instant, as if disclosed by the opening of the wings at each successive expansion. It is of considerable intensity in a single insect, but when three or four are brought together it is sufficient to render the smallest object around quite visible."—*Naturalist's Library* (Sir J. Jardine), vol. ii. 173.

"When a number of these moving stars are seen to dart through the air in a dark night nothing can have a more beautiful effect."—*Introduction to Entomology* (Kirby and Spence), vol. ii. letter 26.

Pliny describes them much in the same way, and adds another name: "Cicindela. . . . Ita appellanti rustici stellantes volatus."—18, 66.

The Oxford copy reads—*nen nittech*, "shining birds"? which seems an attempt to explain, but the description can only apply to fire-flies.

<sup>p</sup> *Asbestos*.—From *α*, and *σβεσσωμι*. The copyist of the Oxford ms. seems not to have known this word, and proposes as an emendation *rofeist*, but Mac Cosse gives its correct etymology, which seems to imply a knowledge of Greek: "It was employed for the wicks of lamps in the ancient temples, and because it maintained a perpetual flame without being consumed, was named *ασβεστος*, unextinguished. It is now used for the same purpose by the natives of Greenland."—



## LVIII.

ceppail<sup>109</sup> o chóinnē<sup>110</sup> cu-ñ-glóir. fo cúaid cuip-in-maciuoin  
cír ifail immas n-ḡai n-ḡlar.<sup>111</sup> cír inno<sup>112</sup> maiē marcadair.

## LIX.

maciuoin if ualmáit<sup>113</sup> oron. im-rino aoráit cen imrol  
hiptia<sup>114</sup> o ualmáit cu réin. fo uer cu rliab n-ailp n-arporeil.

## LX.

ino-ecáil fairuor aia. rliab ailp etarpu if ḡallia  
muir ina timchéil con<sup>115</sup>-a muir. ośa liḡuir<sup>116</sup> co libuir.

## LXI.

in róim<sup>117</sup> co h-urḡna ar a lár. cadír cunla<sup>118</sup> na román  
a cuada cuip-in-muir mer. ar cad leē ina timchel.

## LXII.

cír ḡroēa tecaic a h-ailp. riar uar ino-eoráip aruait<sup>119</sup>  
ḡruē réin riar-cúaid arpaḡair.<sup>120</sup> ḡruē liḡuir if ḡruē rośáin.

## LXIII.

cáir ecir liḡuir<sup>121</sup> if réin. acá ḡallia narbóneim  
ec'ruu ciar c'réit ra<sup>122</sup> c'réit. acá luḡuon<sup>123</sup> if belḡeic.

## LXIV.

acuittain<sup>124</sup> moir co-n-a-míad. o liḡir co muir corrian  
co ḡruē rośáin ifrin<sup>125</sup>-c-rléib. riaruor co rleibí p'réin.

## LXV.

erpáin o rleib p'rinein<sup>126</sup> riar. cuaid ue toeb mara corrian<sup>127</sup>  
muir ina timchéil cec uia. acē illeē fair rí ḡallia.

## LXVI.

iche<sup>128</sup> cuada ḡabait<sup>129</sup> ḡláim. ḡallia petic t'ingitain  
c'arḡaconenif ra<sup>130</sup> clé. lucitáin c'ad c'arḡaigne.

<sup>109</sup> ceppair, L.  
<sup>110</sup> ocholint, R.  
<sup>111</sup> ḡae n-ḡlar, R.  
<sup>112</sup> in, L.  
<sup>113</sup> ualmán, L.  
<sup>114</sup> ifteir, R.  
<sup>115</sup> omit, L.  
<sup>116</sup> ibair, L.  
<sup>117</sup> inoróm, R.  
<sup>118</sup> cunla, L.  
<sup>119</sup> narpaicit, R.

<sup>120</sup> arpaḡair. riar .r. liḡuir .r. ro-  
<sup>121</sup> liḡuir, R. [uáin, R.  
<sup>122</sup> rí, R.  
<sup>123</sup> luḡuon, R.  
<sup>124</sup> ecuitáin, L.  
<sup>125</sup> fair if, R.  
<sup>126</sup> p'rinein, L.  
<sup>127</sup> corrien, R.  
<sup>128</sup> acé, L.  
<sup>129</sup> vel ḡellait, R.  
<sup>130</sup> ra.

LVIII.

Thessaly from famous Corinth, northward to Macedonia,  
Land wherein are many green spears;<sup>1</sup> land of good horsemanship.

LIX.

Macedonia, and Dalmatia the firm, are around the point of the Adriatic;  
Istria from Dalmatia to the Rhine, southward to the lofty conspicuous Alps.

LX.

Italy south-east is its length: the Alps [are] between it and Gaul;  
The murmuring sea surrounds it from Liguria to Liburnia.

LXI.

Rome with its preparations ready, the politic city of the Romans,  
Her territories reach the lively sea on every side around.

LXII.

Three streams issue from the Alps, westward across Europe they appear;  
The river Rhine is observed in the north-west; the river Loire and river Rhone.

LXIII.

In the east, between Loire and Rhine, is Gallia Narbonensis;  
In the west between them, side by side, are Lugdunum and Belgica.

LXIV.

Aquitania, great and proud, from the Loire to the Torrian Sea;  
To the river Rhone in the mountain; [and] south-west to the Pyrenees.

LXV.

Spain, westward from the Pyrenees; on the north it lies beside the Torrian Sea;  
The sea is always around it except on the east by Gallia.

LXVI.

In it are territories known to fame, Gallæcia, Bætica, Tingitana,  
Tarraconensis the renowned, Lusitania and the territory of Carthagera.

Dana's *Mineralogy*, p. 371. It was also manufactured into cloth by the ancients, who were acquainted with its incombustibility. It is said that Charlemagne had a tablecloth of this kind, which he used to have thrown into the fire after dinner for the astonishment of his guests. It is here said to be found in Arcadia, but Pausanias says the only place in Greece where it occurred was Elis, which, however, was on the borders of Arcadia.

<sup>1</sup> *Spears*.—Apparently an allusion to the Macedonian phalanx.

## LXVII.

ուիլ Բրետան Բրուց Կոմ-Բուսո. ուիլ Երեսո թա ճուճրճուս  
 Գր-Ին-ճիւն<sup>131</sup> Դարսըր Իրիւ. Ետիլ Երթաւ Իլ Զալլիւ.

## LXVIII.

Եիլ Դաւիթ ԴսԲաճ Դեճաւ Դրեճ. Եիլ Իբէճար<sup>132</sup> Մու Դուլեւ  
 Եիլ իւ ճիւճ Դ-ԶաԲԼԱճ ԿՕ-Դ-ԶԼՕՐ.<sup>133</sup> Եիլ Իլ ԵարԲաճ թօ Բըրր Օն.

Ռօբըրթ.

<sup>131</sup> MS. Գրմաճիւն.

<sup>132</sup> Գր Դեճար, L.

| <sup>133</sup> Եիլ Դ-ԶԼԵԹ Դ-ԶաԲԼԱճ Դր ԶԼՕՐ, R.

LXVII.

The island of Britain, victorious land ;\* the Island of Eriu at its north-west,  
In the ocean it extends south-west, between Hispania and Gallia.

LXVIII.

Land pleasant, joyous, full of wealth ; land where the sons of Milesius are known ;  
Land of glorious branching stems ; land the most fruitful that is known.

---

\* *Land* : *brug* (*bruig*, anciently *mruig*), which occurs also in xxvi., appears to be akin to the German *mark*. In the Aremorian dialect, where it takes the form *bro*, it is found applied to England, as here: *bro-Zaos*, i.e. Saxon land. Zimmer *Keltische Studien*, s. 118. This stanza is wanting in the Oxford ms.

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XXXIX.—NOTES ON A MUMMY IN THE POSSESSION OF LORD JAMES BUTLER. BY A. MACALISTER, M. D., F. R. S., Fellow of St. John's College, and Professor of Anatomy in the University of Cambridge.

[Read, January 22, 1883.]

THROUGH the kindness of Lord James Butler I have had the opportunity of assisting at the examination of a female Mummy, which has been for some time in his Lordship's collection. It was brought from Egypt by Lord Walter Butler about the year 1848, having been presented to his Lordship by Mr. Salt; but as to its original source I have no information.

The body was contained in a single wooden coffin, of the kind which is so common from the twenty-first dynasty onward. The bandages were of plain linen, which here and there showed traces as though it had been inscribed, but all the surface had long since been destroyed by damage and exposure, and the body itself was quite fragmentary. It was that of a small middle-aged female, of small stature (under five feet), with a well-formed head and (apparently) straight features, and very small hands and feet.

The coffin lid is much broken, but all its pieces are preserved. The upper part of the lid is carved in the form of a female face, with a *nemes* head-dress, and a pectoral collar of the usual diced pattern, with, medially, a winged disk, along the margin of which on each side is a line of inscription—

“Ta an Nut mes neteru.”

“Says Nut, daughter of the gods.”

Below is an oblique chequered band, under which are the eyes of Horus, which fill up the corners on each side of the semicircular collar. Below the eyes on each side is a ram with a double feather between his horns, and standing on a standard, the emblem of Horus; and between these, on each side, are ten short vertical lines of inscription, separated in the middle by a winged disk, and the *nub* or emblem of gold. These lines read thus, on the right:—

Give royal supplies, Osiris.  
Unnefer, Great God, Lord of Heaven \*\*\*  
Great God, may he give bread.  
Beer, thousands of wax.  
Thousands of all things good, pure.  
Thousands of wax.  
Thousands of offerings all pure.  
Thousands of offerings all good.  
Thousands of all things delicious.  
Palm-fruits, thousands of.  
To the spirit of \*\*\*



On the left the inscriptions read :—

Give royal supplies, Nut.  
 Daughter of the gods, Lady of Heaven.  
 \* may she give all things.  
 Good, pure \*  
 Thousands of.  
 All things delicious, palm-fruits.  
 Things, offerings all, thousands of good offerings.  
 Wine, delicious palm-fruits.  
 Offerings to the spirit of the Osiris, the Lady of the House.  
 \* \* \*  
 \* daughter of Tafnext justified.

Below these is a single chequered band across the middle of the lid, from side to side, under which is a single line of hieroglyphs reading from left to right, thus :—

|                      |                   |            |             |        |       |
|----------------------|-------------------|------------|-------------|--------|-------|
| Suten ta hetep       | Asar Unnefer      | neter aa   | ta nef      | aka    | heqt  |
| Give royal supplies, | Osiris Onnophris, | great god, | may he give | bread, | beer, |

|       |                     |                       |                        |        |
|-------|---------------------|-----------------------|------------------------|--------|
| ahau  | xa em aptu          | xa em neter senter    | xa em hebs menx        | en ka  |
| oxen, | thousands of ducks, | thousands of incense, | thousands of clothing, | to the |

|                       |                    |            |                      |              |     |
|-----------------------|--------------------|------------|----------------------|--------------|-----|
| en                    | Asar               | nebt pet   | Tes net per maxeru   | xer neter aa | neb |
| spirit of the Osiris, | lady of the house, | Tesnetper, | justified before the | great god,   |     |

|                   |         |
|-------------------|---------|
| pet               | Abutu   |
| lord of heaven in | Abydos. |

Another chequered line comes below this, then a single dark fillet with light borders, and still lower is a row of vignettes in a cross line representing the judgment scene in the hall of the two truths, as shown in the vignette to the 125th chapter of the Ritual of Osiris or Totdenbuch.

This picture is double, the scene being laterally reduplicated. In the middle are two figures of Osiris the judge, seated back to back, bearing the *atef* and *pschent* crowns, and having in his hand the *uas*, or sceptre, *heq*, or hook, and *neχex*, or whip. Before him is an upright stake, whereon is suspended a slain sacrifice; but the four genii of the Amenti are not represented. Facing Osiris, and next to the altar, stands Thoth, ibis-headed, the recorder, with style and tablet, taking the place of Horus, and introducing the draped figure of the dead by the hand; behind whom stands Ma, the goddess of truth, presenting the dead with her two hands. Three figures stand behind: one a reduplication of Ma, the others being Sekhet (cat-headed), and a bearded figure. Still farther out is the balance, under one beam of which sits Set, superintending one scale; while Horus, as a hawk-headed figure, presides over the other.

Below this line of pictures, after four plain brown fillets, is another cross line of hieroglyphs reading thus :—“Give royal supplies, Osiris xenti, lord of Taser, great god, lord of Abydos dwelling in Abydos.

may he give bread, beer, oxen, thousands of incense, thousands of all things good, pure, wax, all things good." Then come four more black bands, beneath which are ten small vignettes in a cross series, separated by nine short lines of hieroglyphs.

The central vignette is the usual embalming scene, with Anubis, jackal-headed, operating on the body of the dead, which lies on a bier, over which the human-headed bird, emblem of the soul, hovers. This is the largest of the pictures of this row, and along its right margin is a line of writing: "Anubis, lord of both lands"; along its left is "Osiris, lord \* \* \* may he give all good things." To the right from within outwards are figures of Tuatmutef, jackal-headed; Hapi, baboon-headed; Amset (destroyed); and the hawk of Horus crowned by the sun's disk. To the left are Thoth, ibis-headed; Tum, Neith, and an obliterated figure; with a hawk to the extreme left like that on the right. The lines of writing between these are, on the right, "Says Hapi, may he give all things." "Osiris neter xenti, may he give"; to the left are, "Says Neith, good goddess, may she give." "Says Tum, lord of both lands, may he give." "All things pure, good, thousands." " \* \* great gods \* \* "

Still lower is another chequered band over a cross band of hieroglyphs: "Give royal supplies Osiris Unnefer, the great god of Abydos, Anubis dwelling in the divine palace \* \* lord of Taser, lord of both lands, may he give clothing, wine, oxen, thousands of wax, thousands of incense, thousands of . . ."

The lower part of the coffin lid, from about the level of the middle of the thigh to the foot, is vertically divided into three parts: in the middle is a line of vignettes and vertical lines of hieroglyphs; while on the side there are smaller lateral vignettes, and shorter cross lines of inscription.

The first central vignette is that of an invocator before a table of offerings, invoking figures of Thoth, Shu, and Atum, similar to the vignette of chapter 114 of the Ritual; below this are six vignettes of standing figures of Neith, Osiris, Isis, Nephthys, Chnum, and Tefnut? Along each side of these are three vertical lines of inscription, which read as follows on the left side:—

|   |                                      |                              |             |
|---|--------------------------------------|------------------------------|-------------|
| Ta an * * *                                       | Anpu xenti neter pa                  | Anpu suti neb ta ta          | ta          |
| Says  | ? Anubis dwelling in the temple,     | Anubis, lord of both lands,  | may         |
| ef xet neb  | abtu xa em merhu en ka en            | Asar                         | nebt pet    |
| he give all things pure,                          | thousands of wax,                    | to the spirit of the Osiris, | lady of the |
| Tes net per maxeru nebt amax.s at Tafnext         | maxeru neb amax                      | xer                          |             |
| house T- justified, all justified, daughter of T. | justified all consecrated before the |                              |             |
| neteru nebt pet                                   | Anpu xent neter ha                   |                              |             |
| gods, lords of heaven,                            | Anubis dwelling in the temple.       |                              |             |

|        |                |                                |                  |     |
|--------|----------------|--------------------------------|------------------|-----|
| Ta * * | xenti uast * * | ta ef aka                      | heqt ahau xa em  | xet |
| Says   | dwelling in    | may he give bread, beer, oxen, | thousands of all |     |

nebt nefer abt xa em merhu en ka en Asar nebt pet Tes net  
things, good, pure, thousands of wax, to the spirit of Osiris, lady of the house, T.

maẖeru nebt amaẖ . xa . ahau xa aptu xa em neter  
justified, all justified, thousands of oxen, thousands of ducks, thousands of

senter āku ẖet neb menẖ  
incense, bread, all things, clothing.

Ta an Asar Unnefer neter aa ta ef aku heqt arp xa  
Says Osiris Onnophris, great god, may he give bread, beer, wine, thousands

em ahau xa em aptu xa em neter senter xa em hebs menẖ en ka  
of oxen, thousands of ducks, thousands of incense, thousands of clothing, to the

en Tes net per maẖeru sa Tafnext nebt amaẖ ẖer neteru aa . nebt  
spirit of T . justified, daughter of T . all justified before the great gods, lords

pet ẖer neteru Ptah . Soẖar Amset neb  
of heaven, before the gods Plah Socharis Amset, lord.

On the right side the lines read as follows:—

Ta Anpu \* \* neter aa neb Abutu Amset ta ef aka heqt  
Says Anubis \* \* god, great lord of Abydus Amset, may he give bread, beer,

xa em ahau xa em aptu xa em neter senter xa em menẖ  
thousands of oxen, thousands of ducks, thousands of incense, thousands of clothing,

hebs ẖet neb . xa em merhu en ka en nebt pet Tes net per  
all things, thousands of wax, to the spirit of the lady of the house, T .

maẖeru nebt amaẖ  
justified, all consecrated.

— neb pa Tat Asar Sokar Amset ta ef aka heqt  
lord of the house, Tat, Osiris Soẖaris Amset, may he give bread, beer,

arp xa em ahau xa em aptu xa em neter senter xa em  
wine, thousands of oxen, thousands of ducks, thousands of incense, thousands of

menẖ hebs en ka en Asar nebt pet Tes net per maẖeru neb  
clothing, to the spirit of the Osiri, lady of the house, T justified all, consecrated

amaẖ sa Tafnext maẖeru — Anpu ẖenti Abutu . Anpu ẖenti ta  
daughter of T . justified, Anubis, dwelling in Abydus, Anubis dwelling,

ef ta ef aka heqt xa em ahau xa em aptu  
may he give may he give bread, beer, thousands of oxen, thousands of ducks,

xa em neter senter en ka en Tes net per . maẖeru neb amaẖ ẖer .  
thousands of incense, to the spirit of T . justified, all consecrated before

sa . Tafnext maẖeru ẖer neter aa  
daughter of T . justified before the great gods.

Two longer lines of vertical inscription lie outside a vertical chequered band on each side of the inscriptions just given; the one on the left side reads as follows:—

|      |                |       |                 |                |        |
|------|----------------|-------|-----------------|----------------|--------|
| Ta   | suten hetep    | Net   | nebt pet her    | neteru         | Anpu   |
| Give | royal supplies | Neith | lady of heaven, | over the gods, | Anubis |

xenti em    neter    pa .    ta ef    xet neb.    heqt xa em    ahau  
 dwelling in divine palace, may he give all things, beer, thousands of oxen,  
 xa em    aptu    xa em neter senter    xa em    hebs menx en ka en  
 thousands of ducks, thousands of incense, thousands of clothing, to the spirit of

Asar nebt pet Tes net per maxeru.  
 the Osiris, lady of the house, T. justified.

The corresponding line on the right side is damaged, but seems identical, except that it ends "sat Tafnext," "daughter of Tafnext."

The small side vignettes are—first, Hapi standing, and surrounded by the inscription—

|           |                    |       |
|-----------|--------------------|-------|
| Ta Hapi   | Asar . Tes net per | * * * |
| Says Hapi | the Osiris T       |       |

net amax    sa Tafnext    maxeru nebt amax .    maxeru nebt amax  
 all consecrated, daughter of T. justified, all consecrated, justified, all conse-  
 xer neb  
 crated before lord.

|                      |       |                             |                                |
|----------------------|-------|-----------------------------|--------------------------------|
| Hapi neb             | Tanen | Asar Tes net per maxeru xer | neter neb                      |
| Hapi, lord, of Tanen |       | T                           | justified before all the gods. |

|                         |                      |                            |                    |
|-------------------------|----------------------|----------------------------|--------------------|
| Hetep (thrice repeated) | en ka en             | Asar nebt pet              | Tes net per maxeru |
| Offerings               | to the spirit of the | Osiris, lady of the house, | T justified.       |

Hetepu  
 Offerings.

The second vignette represents Kabhsenuf, and is bordered by the following short lines of inscription:—

|                |                |
|----------------|----------------|
| Ta Kabhsenuf a | Asar           |
| Says K.        | of the Osiris. |

|                           |                        |
|---------------------------|------------------------|
| Tes net per maxeru xer em | *                      |
| T .                       | justified before the * |

|                               |                        |           |
|-------------------------------|------------------------|-----------|
| maxeru nebt pet               | xer neb                | neter her |
| justified, lady of the house, | before all goods over. |           |

|                             |                    |                     |      |
|-----------------------------|--------------------|---------------------|------|
| heqt xa em neter senter     | xa em              | ahau xa em          | aptu |
| beer, thousands of incense, | thousands of oxen, | thousands of ducks. |      |

en ka en                      Asar   nebt pet                      Tes net per maḫeru nebt amaḫ  
 to the spirit of the Osiris, lady of the house, T                      justified all, consecrated  
 ḫer nebt neter aa  
 before all great gods.

The third vignette represents Anubis, and round him are the lines :—

Ta Anpu  
 Says Anubis.  
 Asar   nebt pet                      ?  
 Osiris, lady of the house, Tes net per justified.  
 nebt amaḫ                      ḫer neter                      nebt pet her                      ta ef                      ākau  
 all consecrated before the gods, lord of heaven, ruler of ? may he give bread,  
 ḫa em neter senter                      ḫa em                      hetepu                      ḫa em                      merhi, ḫa em  
 thousands of incense, thousands of funeral gifts, thousands of wax, thousands of  
 ḫet nebt                      merhu ḫa em nebt nefer  
 all things, wax, thousands of all things good.

The fourth vignette represents Horus, and his inscription is similar :—

Ta an Har   pen                      Asar   Tes net per maḫeru sat  
 Says Horus                      Osiris, T.                      justified, daughter of  
 Tafnext maḫeru nebt Amaḫ ḫer neter aa                      ta ef                      ḫet                      nebt  
 Tafnext justified, all consecrated before the great gods, may he give all things,  
 heqt arp . ḫa en                      ḫet nebt                      nefer netem bener                      ḫa en                      merhu  
 beer, wine, thousands of all things, good, sweet, delicious, thousands of wax, to  
 en ka en                      Asar   nebt pet Tes net per  
 the spirit of the Osiris, lady of the house, T.

The fifth vignette is one of Seb, surrounded by a line of inscription :—

Ta an Seb erpa neteru                      ḫa en                      ahau ḫa en                      merhu ḫa en  
 Says Seb, prince of the gods, thousands of oxen, thousands of wax, thousands  
 ḫet                      nebt                      en ka en                      Asar   nebt pet Tes net per maḫeru  
 of all things, to the spirit of Osiris, lady of the house, T. justified.

On the right side the succession of vignettes is Amset, Tuantmutef, Anubis, and Seb, around each of which is a similar inscription :—

Ta Amset neter                      maḫeru nebt amaḫ                      ḫer neter aa  
 Says A. lord to Tes net per, justified all, consecrated before the great gods,

ahau aptu āka abt xa em en ka en Asar nebt pet  
oren, ducks, bread, pure, thousands of, to the spirit of the Osiris, lord of the house,

Tes net per maḫeru nebt amaḫ  
T. justified, all consecrated.

Ta an Tuautmutef her maḫeru sa nebt pet  
Says Tuautmutef, lord of justified, daughter of the lady of the house,

neḫt maḫeru nebt amaḫ ḫer neter aa ta ef art aka neter  
Tafneḫt, justified all, consecrated before the great gods; may he give wine, bread,  
sender hetepu ḫet neb ar ab mu . en ka en nebt pet Tes net per  
incense offerings, all things pure, to the spirit of the lady of the house, T.

maḫeru  
justified.

Ta Anpu ḫenti neter pa Asar Tes net per maḫeru  
Says Anubis, dwelling in the divine palace, the Osiris, T. justified, daughter

maḫeru nebt amaḫ ḫer neter aa sa nebt  
of T. justified, all consecrated before the great gods, daughter of T. justified

ḫeru ḫer neter aa ta ef xa en ḫet hetepu en ka en nebt pet  
before the great god; may he give thousands of things, offerings, to the spirit of

Tes net per maḫeru  
the lady of the house, T. justified.

Ta Asar net ta ef nebt anḫ hetepu nebt  
Says Osiris, may he give all things living, offerings all,

tef tef tef en ka en  
offerings to the spirit of.

Ta an Seb Asar nebt pet Tes net per maḫeru  
Says Seb, Osiris, lady of the house, T. justified,

sat Tafneḫt maḫeru ḫer neb neter aa  
daughter of Tafneḫt, justified before all the great gods.

On the foot of the lid is a standing figure of Isis as an invocator,  
and around it—

hetepu nebt en ka en Tes net tes per maḫeru tef tef tef nebt  
All funeral feasts, to the spirit of T. justified, offerings all,

en ka en nebt pet S. net per maḫeru  
to the spirit of the lady of the house, T. justified.

It will be seen that the spelling of the name has been carelessly  
done here.

The inside of the lid was whitened, and adorned with, in the centre, a female figure as invocator, about two feet and a half high, with an inscription above and below : these, like the similar line of hieroglyphs which engirdled the lid on the inside of its margin, are very much injured. These are, however, identical with corresponding inscriptions on the inside of the coffin.

The body of the coffin is closely written over within and without. On the inside there is a line of inscription commencing at the head, and continuous all round the side to the feet. The two side halves of the line begin at the middle of the head, and pass down on each side till they meet at the feet. Along the left side this is a *suten ta hetep* in the name of Osiris Unnefer, the great god, lord of Abydus, Amset, Anubis, dwelling in the divine palace, and a request for bread, beer, oxen, ducks, incense, clothing, wax, and thousands of good things, to the spirit of Tesnetper. Along the right side is a similar invocation in the name of Osiris Unnefer, belonging to Lycopolis, and of Tuaut-mutef; at the foot are the words *tef, tef, tef; hetep, hetep, hetep*.

On the inside of the bottom of the coffin is the longest of the inscriptions, which reads as follows :—

Give royal supplies, Osiris, { xenti em set neter } of Abydus, Anubis (Neith, Amset), Osiris Unnefer, Osiris, lord of Tattu, Osiris Soxaris, Anubis dwelling in the divine palace. May he give bread, beer, oxen, ducks, thousands of incense, thousands of wrappings, thousands of wax, thousands of wax, thousands of all things good, pure, thousands of all things delicious, sweet, thousands of offerings all, thousands of offerings all, thousands of wax, to the spirit of the Osiris, lady of the house, Temetper, justified, all consecrated before the great gods of Abydus. May he give all things good, pure, thousands of wax, thousands of all things sweet, delicious, thousands of wax, thousands of all funeral meats, thousands of all offerings, thousands of incense, thousands of all things good, delicious, sweet, to the spirit of the Osiris, lady of the house, Temetper, justified, all consecrated before the great gods.

The figure of the female is the same as on the lid; on each side of the figure are two short vertical lines :—

Ta an Nut neb ta ta nefer ta . s xet neb nefer neter bener  
Says Nut, lord of both lands, good. May she give all things good, delicious.

Ta Anpu neb ta ta  
Says Anubis, lord of both lands.

The lines below the feet are very much obliterated, the gummy material used in the embalming having stuck to the composition on the wood of the coffin, and obliterated the hieroglyphs. The parts left read like those above.

On the outside of the coffin are, in the middle, five long vertical lines of inscription from the head-dress to the feet, which read as follows :—

Ta suten hetep Ra Harmaxis neter aa neb pet Ra per  
Give royal supplies, Ra Harmaxis, great god, lord of heaven, Ra coming

em akhu pen      Ta ef per er xeru      hetepu neb tefu neb en ka en  
from this rising. May he give funeral meats, all supplies, all offerings, to the  
bread and beer

nebt pet Tes net per      maxeru nebt amax      teri a i f necht  
spirit of the lady of the house, T. justified all, consecrated, daughter of Tafnext,

maxeru.      (Mistake for sa Tafnext maxeru.)  
justified.

Ta suten hetep      Ptah Soxaris Osiris her ha pet      Ta ef per  
Give royal supplies, Ptah, Soxaris, Osiris, lord of heaven.      May he give

er xeru      ahau aptu neter senter merhu menx hebs xet neb nefer abt  
funeral meats, oxen, ducks, incense, wax, clothing, all things good, pure,

en ka en neb      pet      Tes net per maxeru  
to the spirit of the lady of the house, T.      justified.

Ta suten hetep      Anpu am Utu      n neb Taser en amenti  
Give royal supplies, Anubis, belonging to Lycopolis, lord of Taser in the West,

neb (Anpu) xenti neter      pa      ta ef per er xeru      hetepu neb  
Anubis, dwelling in the temple; may he give funeral meats, gifts all,

tefu neb \* \* \* —  
offerings all.

Ta suten hetep      Seb erpa neter      ta ef per er xeru arp . s art  
Give royal supplies, Seb, prince of the gods. May he give funeral meats, wine,

xet nefer en ka en nebt pet Tes net per      maxeru nebt amax  
things good, to the spirit of the lady of the house, T. justified, all purified.

Ta suten hetep      Asar xenti ament      neter aa neb Abut  
Give royal supplies, Osiris, dwelling in the west, great god, lord of Abydos.

Ta ef per er xeru      ahau aptu neter senter en ka en nebt pet Tes  
May he give funeral meats, oxen, ducks, incense, to the spirit of the lady of

net per      maxeru nebt amax      sa t      Tafnext maxeru  
the house, justified, all consecrated, daughter of T.      justified.

These lines, included in a chequered border, occupy the middle part of the coffin, while the rounded sides are covered with short cross lines, thirty-seven on the right, and forty on the left. These read continuously, the right being—

Ta suten hetep      Asar xenti      uasti ament      neter aa neb Abutu  
Give royal supplies, Osiris, dwelling in the west of Thebes, great god, lord of Aby-

ta ef per er xeru      xa em      art      xa em      heqt xa em  
dus; may he give funeral meats, thousands of wine, thousands of beer, thousands of



ahau xa em aptu xa em neter senter xa en merhu  
 oxen, thousands of ducks, thousands of incense, thousands of wax,  
 xa em menx hebs menx xa em arp ar tt. xa em hetepu  
 thousands of clothing, thousands of wine thousands of funeral  
 xa em tefu xa em xet neb nefer abt xa xet  
 meats, thousands of offerings, thousands of all things good, pure, thousands of all  
 nebt netem bener anx neter am . en ka en nebt pet  
 things sweet, delicious, living, divine, to the spirit of the lady of the house,  
 Tes net per maxeru nebt amax sa t. i fnext maxeru nebt amax  
 T. justified, all consecrated daughter of Tafnext, justified all, conse-  
 ar ten neb . s . rr . maxeru nebt amax xer Asar xenti  
 crated, done, before all, justified, all consecrated before Osiris, dwelling  
 em Abutu  
 in Abydos.

It will be seen here that the mother's name is again misspelled.

On the left side these cross lines are much damaged, but they read :—

Ta Ra Harmaxis \* \* xa em heqt xa em art xa em  
 Says, Ra Harmaxis, thousands of beer, thousands of wine, thousands of  
 ahau xa em aptu xa em merhu xa em hebs menx xa em  
 oxen, thousands of ducks, thousands of wax, thousands of clothing, thousands of  
 neter senter xa em hetepu xa em tefu neb  
 incense, thousands of offerings, thousands of gifts, all, &c.

and so on, as on the other side.

The back inscriptions are scrawled and frequently misspelled, but there is close under the margin, separated therefrom and from the cross lines by chequered bands, a very well executed line which is precisely similar to the legend of the cross lines on the right, but which on the left reads—

Ta suten hetep Seb erpa neteru Anpu . her Taser neb ta ta Amset  
 ta ef, &c.

The name of the lady is one with which I am not familiar, but it is one of a group which seemed to be fairly common, especially in the new Empire. Thus Lieblein has chronicled examples of Tes-mut-per (1118 and 1329), Tes-ra-per (1136), Tesxonsu (1187), and Tes-aset-per (1155). Most of these have the peculiar determinative, somewhat like a linear quadruped with erect tail sitting on its hind legs, and resembling the figure with the syllabic value *set*.

The mother's name Tafnext is not so uncommon, and examples of it are given in Lieblein (1066 and (1067).

In all cases Tes-net-per's name is spelled with a prosthetic *s*, which is simply a phonetic complement of the syllabic sign for *tes*.


[Read, June 11, 1883.]

|                                     |                    |                        |
|-------------------------------------|--------------------|------------------------|
| <i>mer pa xeru</i>                  | <i>Rui Ta sen</i>  | <i>per aq</i>          |
| superintendent of the<br>treasury } | Rui. May they give | to go in<br>and out. } |



The entire back inscription is surmounted by the *Uds*, right and left eyes of Horus, with between them a *son* or ring.


The person herein commemorated is the famous Rui, the Superior of the house of Hatasu, who flourished about 1300 B.C. under Menepthah II., Hotephima, and his successor Seti II. He filled the offices of Commander of the Legion of Amen, Superintendent of the Storehouse of Amen, Chief of Constructions, High Priest of Amen, and, according to this monument, he was Mayor of the Palace, Chancellor of the Exchequer, and Superintendent of the Granaries.

The name Rui is peculiar, although it occurs elsewhere as an Egyptian personal name;<sup>1</sup> and Brugsch Pacha has very ingeniously conjectured (*Geschichte*, p. 584) that the name is of Semitic origin. The Egyptian  is most frequently transliterated into Hebrew as ר, as in Rebu, and Rutennu for Lubim and Ludim; also in the Coptic we find the letters λ and ρ used interchangeably in spelling the same words in different dialects, and for foreign words;<sup>2</sup> similarly the

<sup>1</sup> See Lieblein's *Dictionary*, Nos. 623, 635, 704, 798, 858, 908, 909, 930, 953, and 1018. Of these ten inscriptions (mostly, if not all, of the period of the Israelitish residence in Egypt) three (908, 909, 930) are most probably relative to our hero. The inscription commemorating him from West Silsilis (Lepsius, *Denkmäler*, ur. 200, 2) gives the particulars of some of his offices as follows:—Erpaha, or Prince of the first rank; Commander of the Legion of Amen; Superintendent of the Great House of Amen; Superintendent of the Treasury of Amen in the days of Menepthah II. The inscription given by Lepsius (p. 237) is of his son Ruma, who fulfilled some of these offices in the next reign.

Of the persons of the name Rui enumerated in Lieblein the following are the genealogies:—The first is Amen-Rui, son of Amen Nebuahab and his wife Sata-men, brother of Aakheperka (Leiden). The second from Munich, is the priest Rui, whose wife Ai had four sons, Meriara, Uäunexeta, Ab-mai, and Amhebra, and two daughters Pipiu and Ani. The third from Vienna is in the family of the "Wise Divine Scribe Shebeth" and his sister Ptahmerit, whose son was the scribe of the hierogrammatic school of the Lord of the two lands, Parenen, and his daughter Nefer Ari, whose daughter was Amen Mes. Rui the Merpa, or ruler of the house, was brother of Shebeth, and had another brother Ptahemhat, and two sisters Merinub and Meratxet. All these belonged to dynasties earlier than the XIX<sup>th</sup>. The next from Turin is a lady, Rui, daughter of Ptahemheb and his wife Râau, who had brothers Uaii and Mâaii. In a tablet in London (Lieblein, 953) is a genealogy of the descendants of Nashait, whose children were Bai and Rui, whose son was Chief of Constructions to the King, and his daughter Pipui; their children were Amenahsu, son; the Priest of the House of the Sacred Scribes, Rui, son; Ptahmua, son; and Anaahi, daughter. These names singularly resemble those in 635, and are probably of the same family.

One stele in Boulaq (No. 67) bears the name of An-rui, son of Aahmes.

<sup>2</sup> Thus, for example, in the 10th of Acts, the Coptic Testament has in some dialects ΚΟΡΗΚΡΙΟC for Κορηλ<sup>us</sup>, and in many other instances these letters are used convertibly in the different dialects: thus the Bashmuri uses λ very frequently, where the Boheiriah or Sahidic use ρ, as in λεγ<sup>ω</sup>ι for ραγ<sup>ω</sup>ι, or ρελ<sup>ω</sup>ι for ρερ<sup>ω</sup>ι, &c. Modern Coptic in all its dialects sometimes follows the more Shemitic usage, and replaces with λ the old Egyptian , as for



Egyptian form Aram is used for אֵלָם (Brugsch, *Geog. Ins.* i. 68, ii. 23, 31, 37, iii. 50), while conversely Arya or Bactria is transliterated in Egyptian *āl* (Brugsch, *Geog. Ins.* iii. 66).

From this it may be inferred that Rui = Lui, and this, with the consonantal sound given to the Vau (as in the case of וֹן, the Egyptian *An*, which in Ezekiel<sup>1</sup>, xxx. 17, is pointed וֹן) would indicate that the name Rui was, as Brugsch supposed, the Egyptian equivalent of the Hebrew Levi.

If this be so, then Rui or Levi may have been an Israelite by birth, although emphatically an Egyptian by professed faith; and by conformity to the customs of the country, this primitive Beaconsfield rose to the highest pinnacle of power, like his predecessor and compatriot Joseph. In his monuments, unlike most other Egyptian personages, he does not, as far as I know, give us his mother's name nor his ancestry; but he enumerates the list of offices which he filled, which were indeed the chief posts in the land—religious, military, and civil—some of which he transmitted to his son Ru-ma.

Rui must have occupied this position of influence during the troublous times for Israel which culminated in the Exodus, and must thus have been brought into forcible collision with his greater and more noble compatriot Moses, whose stern refusal of compliance with the requirements of Egyptian worship possibly may have opened the way for the political success of his more wily fellow-countryman.

One can scarcely imagine that these two could have been contemporaries, especially if they were really of the same nation, without being bitter foes: and perhaps, without straining conjecture too far, we may here find the key of a mystery which has long puzzled many acute minds. The Apostle Paul, quoting one of the Jewish historical traditions, speaks of Moses' Egyptian antagonists as Jannes and Jambres (2 Tim. iii. 8). The first of these is called in various records by words which are different modifications of the one well-known Egyptian name *Ani*,<sup>2</sup> a name as old as the shepherd kings, one of

instance ωλι for  In other languages not cognate the same interchange is familiar: thus the Pehlvi use *l* where the Zend has *r*, and in general the physiological relations of these two letters are the closest possible. The reverse change of a Greek *p* into an Egyptian  is seen in the hieroglyphic rendering of the name of the wife of Ptolemy II., Arsinoë, which is written *Als-ar-na*, while the similar name of the wife of Philopator I. is spelled *Al-si-nia*.

<sup>1</sup> The alteration in pointing in this passage in Ezekiel is intended evidently to be suggestive of the vanity of the idolatry of *On*, just as a similar meaning in Hosea, iv. 15, is expressed by the use of בֵּית-אֵלָן for בֵּית-אֵל.

See in this connexion also the interesting point, lost in our English version in Micah, i. 13, where the words לְכִישׁ and רְכִישׁ are used in close connexion as a kind of poetic word-play.

<sup>2</sup> The names of these two magicians are given in very varied forms by the older

whom, according to Manetho, was Iania (Josephus, *Contra Apion.* II. xiv.).

The other name has puzzled etymologists, and appears in a variety of fancy guises: it is *Iambres*, *Mamre*, *Mambres*, *Iambarus*, *Ambrose*, *Iombros*, *Lotapa*,<sup>1</sup> *Jotapæa*, or *Cabala*. In all these versions, except the last three, the radicals are Am and Ro; the ך being evidently euphonic,<sup>2</sup> as in the oldest Talmudic form it is written יִמְרָא; in which form the name resolves itself without much difficulty into *An mer Rui*, or simply *An Rui*, "the priest Rui," the modification being very much less than that by which *Ani* has become Jochanne, Jamnes, or Aves. In the absence of any reason to the contrary, in the view of their contemporaneity, of their both belonging to the priesthood, of their certainly being on opposite sides, and possibly being of a common nationality, we may therefore identify this priest Ro, or Ru, with our

writers; the oldest forms occur among the Talmudists: thus in the tract *Menachoth* of the Babylonian Talmud (ch. ix. p. 85, col. 1, Amsterdam edition, 1715) the names are given as יִוחָנָא וּמַמְרֵא, Iochanna and Mamre. In other Talmudic references Iannes appears as וְהָיָא, יִוחָנָא, or יִוחָנָא, while Iambres is sometimes מַמְרֵי or מַמְרֵא. The rabbinical writers also vary the spelling considerably: thus in the *Zohar* on Numbers, xxii. 22 (Frankf. 1709, p. 90, col. 2) Rabbi Simeon (or his disciple who wrote it) spells them יִוְנִים and יִמְבְּרוֹס, *Iones* and *Iombros*. In the *Midrash Tanxuma* (section *Ki Tesh'a*, Frankf. 1701, p. 38) they are nearly the same, *Ionos* and *Iombros*, while R. Gedaliah ben Iechaija in *Shalsheth Hakabbala* (Venet. 1587, p. 13, c. 2, last line) calls them יִוְאָנִי וְאִמְבְּרוֹסִיאָ, that is, *Iohannis* and *Ambrosius*, *Iohn* and *Ambrose*. Iannes is rendered *Iamnes*, and Iambres *Mambres*, in the Vulgate; and I believe that the form *Dejannes* exists in an Arabic catena, coupled with the names of *Iambarus* and *Sarudas*. Teda Levi, quoted by Fabricius (*Codex Pseudepigraphicus*, Hamb. 1713, p. 815), calls them Aves and Samres. Glycas Siculus (Diss. 1736, vol. i. p. 33) renders it Zambres. The Greek form used in 2 Tim. iii. 8 is 'Ιαννῆς and 'Ιαμβρῆς, as in *Eusebius* (*Præparatio Evangelica*, lib. ix. c. 8, ed. Paris, 1628, p. 435), where, in the quotation from *Numenius Apameus* the Pythagorean, they are called *ἱεπογλαυμαρίεις*, and are said to have been selected by the Egyptians to oppose Moses. In the quotation from *Artapanus* (*Euseb. P. Ev.* lib. ix. c. 27, p. 435) they are called *τοὺς ἱεπεῖς υἱοὺ Μεμφιν*. The discrepancies in the spelling have led to confusion: thus *Jalkut Rubeni* gives three names, *Jonos*, *Jochne*, and *Mamre*. So does the Arabic catena. According to Numenius, they were threatened with death if they did not perform miracles equal to those of Moses, and by their juggleries and incantations they succeeded in altering the colour of the Nile. Thus Artapanus testifies to Iambres' priesthood, while Numenius testifies to his being a sacred scribe or *An*. The discrepancy of the statement of the former, that he was priest at Memphis, with the fact that Rui was priest at Hermonthis, may be taken *quantum valet*.

<sup>1</sup> In Pliny (*Hist. Naturalis*, lib. xxx. c. 1) the three Jewish magicians are given as *Moses*, *Iamnes*, and *Iotapa*; the last name varies a little in different editions. In the Elzevir of 1616, and the Aldine of 1530, it is "Mose et Iamne et Iotape." In the Paris edition of 1532 it is "Mose etiamnum et Iochabela."

<sup>2</sup> This is evident; for as Buxtorf (*Lexicon Chald. Talm.* 1639, p. 946) shows the ך is similarly inserted in the Mamre of Genesis, xiii. 18, by the Targumists.

high-priest Rui. If this be so, the Talmudic tale<sup>1</sup> of his having been drowned in the Red Sea is certainly erroneous, as Rui survived his master Menephthah, and of him and Ani the tombs were known long after, as Palladius, in the Lausiac History, speaks, in the section *peri Makariou tou Alexandreos*, of *Κηποταφίον τοῦ Ἰαννοῦ καὶ Ἰαμβρου τῶν μαγῶν*.

There is a statue somewhat similar, though larger, in the British Museum.

<sup>1</sup> The Rabbinical authorities differed as to the ultimate fate of these magicians, but they agree for the most part in regarding them as the sons of Balaam, and identify them with the magicians who warned Pharaoh of the birth of Moses. Abulpharagius (*Hist. Dynastiarum*, p. 17) says that the young Moses was given over to them to teach, that they taught him magic; hence Apuleius (*Apologia*, Paris, 1635, p. 100, l. 18) speaks of *is Moses et Iannes* as magicians. We learn from the *Jalkut Rubeni* (p. 81, col. 2) that being foiled by Moses by the plague of the lice they became proselytes, but not sincere ones, for according to Tanxuma (p. 36, col. 2) they became the leaders of the defection of the golden calf. One ancient Midrash on Ex. xv. 10, says that Iohanne and Mamre were drowned in the Red Sea. So says the Arabic Catena; while Jonathan ben Uzziel, in the Targum on Num. xxii. 22, says they perished in the slaughter of the Midianites. In the Zohar before quoted (108, c. 2) in the comment on Exod. xxxii. 28, they are said to have perished in the slaughter by the Levites: indeed the passage is explained to mean that the Levites slew these two, who in evil influence were as bad as 3000.

For further conjectures, see Schöttgen, *Horæ Hebraicæ et Talmudicæ in Nov. Test.* Leipzig, 1733; Grotius, *Dissertatio de Ianne et Iambre*, Hafniæ, 1707; Zentgraf, *de Ianne et Iambre*, Argent. 1669; Michaelis *de Ianne, &c.*, Halæ, 1747; Wetstein, *Nov. Test.* Amst. 1751; Bochart, *Hieroicoicon*, Leyden, 1692, i. lib. ii. p. 645, cap. 53; and Dilherr, *Disputationum*, Noriberg. 1652, vol. i. p. 272. The book of Iannes and Iambres was supposed to be extant in the days of Origen (*Comm. in Matth.* xxvii. 9, in ed. Paris, 1711, p. 1012), at least in referring to the prophecy regarding the potter's field he says, in commenting on quotations from uncanonical books, that this passage on the Egyptian magicians is taken from a certain "*libro secreto qui superscribitur Iannæi et Mambrei Liber*." Among the earlier commentators there was a considerable difference of opinion as to Paul's source of information: some, like Theodoret (*in loco*), teaching that he had learned it from Jewish tradition; others, like Ambrose (*Opera*, 1549, p. 2070 D), regarding it as a quotation from an apocryphal work, to which he refers, and from which he has probably gathered the fact that they were brothers, a statement also made by Palladius (*loco citato supra*); while others believed that it was learned by direct inspiration. The name *Ani* occurs in several monumental inscriptions: there is in Turin an inscription of a scribe of this name (Stele, No. 69), with no genealogy.

XLI.—EGYPTOLOGICAL NOTES. NO. I.—ON A SERIES OF SCARABÆI.  
By ALEXANDER MACALISTER, M.D., F.R.S. (Plate XVIII.)

[Read, 22nd January, 1883.]

A SERIES of Scarabæi, the property of J. R. Garstin, Esq., was lent to me for examination, with the history that they had formed a portion of Belzoni's Collection, and, having been purchased therefrom, had been mounted as a necklace. There are sixteen, whose inscriptions are as follows:—

1. Length 2 cm.; breadth 1·5; green enamel; winged disk; two hawks: "*Nefer neter Ser-Ka-Ra nefer anḫ nefer nub*," "The good God; Ser-Ka-Ra, Good life of Gold." Ser-Ka-Ra was the by-name of Amenhetp I., the second king of the eighteenth dynasty, who reigned about 1600 B.C. Fig. I.

2. Green enamel; brown-backed; length 2 cm.; breadth 1·2 cm.; scroll bordered: "*Mer pet hehpu ka Har*," "Superintendent of the House of Accounts of the Cattle, Horus, or Ab-har." This discontinuous scroll border I am informed by Dr. Birch is very ancient. Fig. II.

3. Brown enamel; length 2 cm.; breadth 1·2 cm.; Papyri, the crown of the lower country on each side; the wasp, and emblem of the south country "*res*"—the whole probably meaning "King of the Upper and Lower Country." Fig. III.

4. Dark-brown stone; broken; deeply cut: "*Ra nefer ura*," "The sun guards the good passage." Fig. IV.

5. Brown stone; length 1½ cm.; breadth 1 cm.; criocephalic standing figure of Amen, holding *anḫ* in right hand, and *heq* in left, with, in front, a cartouche inscribed with the name *Ramenḫeper*, the prænomen of Thothmes III., the Great King, the fifth of the eighteenth dynasty, who reigned about 1550 B.C. Fig. V.

6. Small green enamel; 1 cm. long; 7 mm. broad; inscribed with a scroll having a *nefer* on each side. The curve is exactly that of the profile of the modillion of a Corinthian column. Fig. VI.

7. Small green enamel; 6 mm. long; 8 broad; inscribed "*Amen neb*," possibly a name. Fig. VII.

8. A long ellipse, not beetle-like; inscribed *Ra neb uat*, possibly a name; 15 mm. long; 6 mm. broad. Fig. VIII.

9. An ornamental urn or patera, with two side uræi and *neb* below. A similar ornament I have seen upon monuments of Uasarkon of the twenty-second dynasty, the "*Zerah*" of the Book of Kings, who reigned in the ninth century B.C. This is not beetle-like, but resembles an *ovulum* shell. Fig. IX.

10. Also of green enamel; 10 mm. by 6; inscribed with a uræus, or symbolic serpent. Fig. X.



11. Green enamel; inscribed "*neb xet nefer*," "all good things"; length 12 mm.; breadth 6. Fig. XI.

12. Green enamel; 12 mm. by 9; inscribed with the Papyri or emblem of the lower country, below which is written "*neb nefer*," "Good Lord of the Lower Country." Fig. XII.

13. A brown enamel, very doubtful, suspiciously new-looking beetle. Dr. Birch is likewise inclined to doubt its genuineness. It is inscribed *Amen ra neb*. Fig. XIII.

14. Green enamel; 17 mm. by 12 mm.; a boldly-cut hawk of Horus, with the sign *neb* beneath, "*Har neb*," "Horus Lord." Fig. XIV.

15. A large fine Scarabæus; 22 mm. by 13 mm.; with a handsome continuous scroll border, not unlike the discontinuous scroll of No. 2, within which is an ogee scroll above and below, with the two eyes of Horus and Ka-Ka below. There was a king Ka Kau of the fifth dynasty, but his name is written differently. Fig. XV.

16. A very small ill-made Scarabæus, with imperfectly written on it "*Ten ha ra men neb*," possibly a name. Fig. XVI.

A soft grey stone Scarabæus, given to me by the late Rev. Canon Finlayson, and obtained by him from Dr. Yule of Alexandria, is inscribed "*Mer-i-ra-s*," "Beloved of the Sun." This very closely resembles the name of the Chief Priest of Khuenaten's new temple. Fig. XVII.

XLII.—INSCRIBED STONES, CO. DONEGAL. By G. H. KINAHAN,  
M.R.I.A., &c. (Plate XIX.)

[Read, February 26, 1883.]

IN the Statistical Survey of the County of Donegal, published by the Dublin Society in 1802, the author, James M'Parlan, M. D., calls attention to a cupped stone near Newtowncunningham, and thus describes it: "In the deer-park of Castleforward, in the beech-grove, is a flag, five feet in diameter, perfectly circular, and regularly indented with holes half an inch deep and one inch diameter; it is raised on other stones eighteen inches high." From this description it would appear that the Castleforward inscribed stone is a table-stone allied to those megalithic structures now generally called dolmens or cromleacs. The stone to which I would call attention belongs to another type, being a gallán or pillar-stone. It stands in the townland of Dooenglebe in Glen Swilly, on the margin of the flat of the river Swilly.

This stone is a little more than two feet in height above the ground, is of a rude triangular shape, one side ranging due S. and N., the second looking nearly south (S. 20 E.), and the third, which is slightly bowed, looking toward the N.E. The top, which is nearly flat, and a little smaller than the base line of the stone, its east corner being also broken off, has on it cups of from about three inches to one inch in diameter, and from half to quarter inch deep; they are represented in Plate XIX., fig. 1, which is a reduction from a rubbing. Plate XIX., fig. 2, is also a reduction from a rubbing of the cups on the southward face of the stone. On the west face there appears to be only one cup, close to the S. E. edge, while on the N. E. face none were found.

From the maps of the top and south face (Plate XIX., figs. 1 and 2) it will be seen that these inscriptions are similar to those in the County Fermanagh to which Mr. Wakeman of Enniskillen has called attention, and also to those found on flat or lying stones and on the sides of pillar-stones in the Counties Wexford and Wicklow, but more especially at Ballykean, near Redcross in the latter. The cups on the Dooenglebe gallán specially prove that they cannot be due to weathering, as both sets of cups are similar; yet one set is on a bed surface, while the other is on a plane surface at right angles to the structure of the rock. If due to weathering, and the first were cups, the latter would have to be either thin discs or crescents. The stone appears to be an altered basic tuff or slaty gabbro, but I did not knock a chip off it.

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NOTES ADDED IN THE PRESS.

The *Dooenglebe cupped standing stone* (Glen Swilly) is called the "King's Stone"; the tradition about it being that the ancient kings were crowned at it. In its vicinity is an ancient well, and immediately above it on the brow of the hill a *caher*, or stone fort.

The *Castleforward cupped table stone* is locally known as the "Giant's Grave." Some fifty years ago, or thereabouts, the table was broken in two, and nearly half of it taken away; now the remaining portion is lying close by, while the supporting pillars have been undermined and tumbled about by people digging after rabbits.

About three miles east of Letterkenny, in the townland of Trimragh, immediately adjoining the old south shore line of Lough Swilly, but now separated from it by a large tract of "intakes," is a large stone called the "Giant's Rock." A portion of this is said to have been quarried away by a man who had a contract on the new road from Letterkenny to Derry; but the piece is lying alongside as if detached by frost. But on the remaining surface, which slopes nearly due east, there are, on one portion, six cups called the "Giant's Finger-holes."<sup>1</sup> These are arranged so as to form two equally-sized equilateral triangles; while on another, and slightly raised portion of the surface, there is one cup. About one hundred yards due east is a large flat stone called the "Giant's Grave," on which are two cups, while in its vicinity, on a rock surface *in situ*, are two or more cups, and on a smaller stone, about fifty yards to the south, is one cup, about two hundred yards S. W. of the "Giant's Rock"; and likewise on the old shore of Lough Swilly there was an ancient church, the site of which has been covered up by the new railway embankment.

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<sup>1</sup> The Donegal giants seem to have had six fingers, besides thumbs, as the "giant finger-holes" that have since been pointed out have each seven cups.

XLIII.—ON SOME BRASS CASTINGS OF INDIAN MANUFACTURE. By  
Professor V. BALL, M.A., F.R.S., F.G.S.

[Read, January 22, 1883.]

THE objects now exhibited, though in themselves of rude design, bear testimony to the possession by those who made them of a considerable degree of skill in the working of metals. Having been made for me, I am acquainted with the circumstances of their manufacture; and a statement of these, together with some general remarks upon the metallurgical processes which are practised by the inhabitants of India, should, I think, prove not unacceptable to the Members of the Academy, who possess in their Museum so many examples of the productions of the pre-historic metallurgists of this country.

By way of preface, I propose to give a very brief sketch of the methods adopted by the natives of India for the extraction of metals from their ores, and their subsequent treatment. Many of these methods, so far as we know, not only date back to the earliest periods of which there is any record, but they were probably first invented at some vastly more remote epoch.

Scarcely without an exception, each of these metallurgical processes involves an expenditure of manual labour and time which are quite disproportionate to the results, and hence it is that imported metals, manufactured in Europe, can undersell the indigenous productions of India. The effect of this competition, throughout wide regions, has been to cause the native miners and smelters to adopt new modes of obtaining their livelihood; but to change his trade is more difficult for an inhabitant of India, owing to the influence of caste, than it is for an artizan of any other country—the consequence being, that these industries are in some cases kept alive by a struggle of the most severe character, where the reward of unending labour is a state of chronic indigence, scarcely removed from one of famine.

It needs no gift of prophecy, therefore, to foresee the extinction of these arts at a not distant period, which in itself affords a strong reason for describing them while the materials for doing so are still available. By some writers it has been remarked contemptuously, that though the native artizans possess the art, they know nothing of the science of these operations. That such is the case is true; but it is also true of many crafts in Europe. The application of scientific guidance is a modern growth, and it has been left to modern chemists to explain the *rationale* of processes, which discovered first by rule of thumb, have been blindly followed for many centuries.

It is quite impossible to enter into any details of Indian metallurgy; already I have published much on the subject;<sup>1</sup> but, as giving some idea of its extent, it may be stated that an account of the various forms of bellows by which the blast is produced would alone afford material for a very long Paper, while an account of the many tribes and races engaged in mining and rough smelting operations could not fail to be of the highest interest to the Anthropologist. It is a most remarkable fact that, throughout a large part of India, so far as I have been able to ascertain, these races and tribes are almost always Non-Aryans, or so-called aborigines. It seems, therefore, at least possible that these arts originated at a period anterior to the Aryan invasion.

*Gold.*—The production of gold in India has, for the most part, been from alluvial washings; but evidence exists that the crushing of auriferous quartz has been practised to some extent in certain localities.

The esteem with which the natives of India regard ornaments of absolutely pure gold is notorious; and they have invented two or more most ingenious and elaborate processes for removing the alloy of silver which occurs naturally in native gold.

Very full accounts of these processes are given in the famous classic of Akbar's time (the *Ain-i-Akbari*), which was written in the 16th century by Abdul Fazl. I cannot here attempt to give even a sketch of them; they are fully detailed in the last edition of Percy's *Metallurgy*. As rendered in the two English translations of the *Ain*, by Gladwin and Blochmann, they were found on trial to be inapplicable to the production of the desired result; and therefore Dr. Percy procured an amended translation which, when followed, enabled him to refine gold with complete success.

*Silver.*—It is generally supposed that India was never a silver-producing country, in spite of the fact that there are early notices to the effect that it was exported thence to China. From evidence which I have collected, I have been led to the conclusion that the amount of silver formerly extracted in India from argentiferous galena may have been considerable. In many parts, but especially in Madras, there are traces of most extensive mining operations having been conducted for galena, much of it now known to be highly argentiferous; and there still lingers, or did a few years ago, a practice of oxidizing the lead into litharge, and so extracting the silver. The process is at present certainly practised in Upper Burmah.

In some countries large accumulations of litharge, treated as a waste product, have been met with, and I think it very probable that, in India, such deposits may also exist, though from being covered up by jungle they may have escaped observation. If I remember rightly,

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<sup>1</sup> Vide "Economic Geology of India."

Captain Newbold in one of his Papers refers to the existence of such evidence of former works in some part of Southern India.

*Lead.*—In certain districts of India lead has been largely manufactured in rudely-constructed furnaces, even where the ore was only obtainable by an enormous expenditure of labour. In one locality its manufacture was prohibited by the British Government, in consequence of the fact that the then existing state of things made it desirable that a material from which bullets were made might cease to be readily accessible.

*Copper.*—At the present day copper is manufactured at many places, chiefly, however, at remotely situated mines in the Himalayas, where it can still compete with imported metal. Its preparation from the sulphur ores, and the production of the *mutt*, from which the metal is finally extracted, does much credit to those who invented the process, although, from insufficient heat in the furnaces, a large percentage of metal is lost.

*Zinc.*—This metal is only found in abundance in one mine, which is situated at Jawar in Rajputana. The volatility of zinc renders open furnaces unsuitable for its reduction, and hence we find that rudely-constructed, though efficient, retorts were in use, but as to when and by whom they were invented we know nothing. The mine was closed in 1812, and the industry is locally forgotten, so that, but for some descriptions of the process written many years ago by British officers, there would be nothing to show that the process had ever been in practice.

*Tin.*—The deposits of tin ores in India are small and unimportant, so far as is at present known, and the manufacture has consequently been on a petty scale; but in Burmah, particularly in the Tenasserim province, tin ore has a widespread distribution throughout a tract which is in direct connexion with the more widely known districts of the Malayan countries. The reduction of these ores is effected in closed furnaces by colonies of Chinese and Shans, and less commonly by Burmese.

*Cobalt.*—An ore of cobalt (cobaltite), called *saita*, is found in certain copper mines in Jaipur. By some unknown and secret process an oxide of cobalt is prepared from it, which is employed for colouring a blue enamel. It is said that it was also used for producing a rose colour on gold..

*Iron.*—The ores of this, the most useful of the metals, are found widely spread over most parts of India, and in some regions their development is on a scale of extraordinary magnitude.

Various ores are used in the simple furnaces of the natives. The metal is produced in a malleable condition, directly, without ever having been in an actually fluid condition. The fuel is charcoal, often made exclusively from particular kinds of timber, and no flux except that naturally existing with the ore is employed. The output from these tiny furnaces is disproportionately small when com-

pared with the amount of labour expended in its production, the consequence being that, in spite of the suitability of this easily-worked metal for the purposes to which it is applied, the industry is being crushed out of existence by competition, and European-made iron, chiefly English and Swedish, is now exclusively used in many districts where there was a large indigenous production formerly.

There is strong evidence in support of the view that the manufacture of iron was in a more advanced stage, and was conducted on a larger scale, at a very early period than it is now. This being granted, the furnaces of the present day should be regarded as degraded survivals of more highly developed predecessors. Otherwise it would be difficult, nay, rather impossible, to account for the large bars of wrought iron to be found in ancient temples, and the enormous cannon, many feet long, which are to be seen in Assam and elsewhere. By far the largest example of metal work in India is afforded by the famous iron pillar at the Kutab near Delhi, which is 23 feet 8 inches high, including an ornamental capital; the diameter at base is 16 feet 4 inches, and just below the capital 12·05 inches; these dimensions indicate a weight of upwards of 6 tons. The metal is pure malleable iron without alloy, and from the inscription which it bears it is considered to be 1500 years old. The manipulation of such a mass might be accomplished without any excessive trouble in some of our modern first-class foundries; but the time is not yet remote when it could not have been accomplished in Europe. The suggestion that this pillar was made by successive weldings on to a heated end is not improbably correct, though traces of such weldings are not now visible on the surface. Be this as it may, this large mass of hammered iron might justly be accorded rank with the wonders of the world.

But the above by no means conveys a complete idea of the extent to which iron manufacture has been carried in India. There are good grounds for believing that *wootz*, or cast steel, was exported from thence to the countries of the western world at least 2000 years ago. It is probably not generally known that the Damascus blades, so widely renowned for their strength, flexibility, and beauty, were made of cast steel, which was carried to Persia for the purpose from an obscure Indian village.

Sixty or seventy years ago this Indian cast steel was in high demand at Sheffield, where it was used for the manufacture of surgical instruments, a practical cutler of that time giving it as his verdict that, in spite of some drawbacks, it was the best material he had met with—this, be it remembered, was a period long before the manufacture of cast steel had become a successful industry in England.

I shall only refer very briefly to the process by which the Indian cast steel was made. The iron used in its manufacture was either a particular variety of charcoal iron, or a mixture of two irons made from different ores. It was chopped into small fragments, and placed

in highly refractory crucibles having a capacity of a pint or less; with this metal some fragments of *Cassia* wood and one or two leaves of a *Convolvulus* or *Ipomea*, according to some authorities—of an *Asclepiad* called *Calatropis gigantea*, according to others—were included, and the whole well heated in the furnace. On opening the crucible, after it had for several hours been subjected to great heat in a strong blast, the metal, fused into a button, was found at the bottom, and, after tempering, it became easily malleable. The introduction of vegetable matter into the crucible provides the carbon necessary in the conversion of wrought iron into steel; but whether there is any particular virtue in the leaves of the species employed is not known.

So far as I know, true bronze is not manufactured in India, though it possibly may be in Burmah. The metal workmanship of India includes nothing which resembles the bronzes of Japan.

Various compounds of zinc and copper are, however, widely used in the manufacture of domestic and ornamental articles, and for these purposes there are enormous annual imports of these metals into India, as the local production at present only supplies a fraction of the requirements.

The various proportional mixtures of copper and zinc bear a variety of different names; they are melted in rudely-constructed furnaces, which are made simply out of clay often to be procured close to the brassfounder's house, where also the material for his moulds is generally obtainable. The preparation of a mould for a solid casting is a comparatively simple affair; but the objects before us are *hollow* castings, and the device adopted in the preparation of moulds for them is remarkably ingenious.

Having prepared a mass of clay with the form of the proposed intended cavity, the operator dips it repeatedly into molten bees' wax till it becomes thickly caked over. In the wax the proposed design is then sculptured, and the whole is enveloped in an outer casing made of the moulding-clay. The molten metal is then poured into the mould, and it speedily melts and occupies the place of the wax throughout all its extent. When it is set, the outer mould is broken off, and the inner is extracted from the interior of the metal.

The majority of these castings represent domestic animals and a few familiar birds; but one of them has the form of the fruit of the mango. They are not intended for toys, as might be supposed from their appearance, but for offerings at shrines, and they are placed round altars in temples, and sometimes in private houses.

I have never seen such offerings openly exposed near road-side altars; but I have many a time come across spots in the jungle, generally under the shade of the sacred Banyan (*Ficus indica*) or Pipal (*F. religiosa*) trees, where there were piles of rudely-shapen figures of baked clay, resembling in shape those of brass.

Poor people are unable to present propitiatory offerings of elephants, camels, and horses, such as are given by wealthy Rajas, to



those deities whose wrath they desire to avert. Hence they have adopted the expedient of offering symbolical representations of more costly gifts. These symbols, in their rudest form, are made of clay. It is only in towns that such brass castings as those I exhibit are made and used, and these were manufactured for me by a brass-founder of Parulia, in the district of Manbhum in Bengal.

I take the opportunity of exhibiting some other objects of metal-work from India. Among these an anklet which, though formed of intricate movable coils, appears to have been cast in one piece. This anklet is of considerable weight, the object of which is said to be, that the wearer of one would not be able to wander far from her home, and would thus be less likely to get into mischief than if she were not so hampered.

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Part 15.—Expansion of Elliptic Functions. By WILLIAM NICOLLS, B.A. [April, 1884.]

Part 16.—On a Geometrical Transformation of the Fourth Order, in Space of Three Dimensions, the Inverse Transformation being of the Sixth Order. By L. CREMONA, LL.D. Edinb., F.R.S., Professor of Higher Mathematics in the University of Rome. [July, 1884.]

Part 17.—Catalogue of the Earthquakes having occurred in Great Britain and Ireland during Historical Times; arranged relatively to Localities and Frequency of Occurrence, to serve as a Basis for an Earthquake Map of the Three Kingdoms. By JOSEPH P. O'REILLY, C.E., Professor of Mining and Mineralogy, Royal College of Science, Ireland. (Plate XI.) [September, 1884.]

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[For continuation of List of Publications, see page iii. of this Cover.]

XLIV.—REMARKS ON AN OGAM MONUMENT BY THE RIGHT REV. CHARLES GRAVES, D.D., Lord Bishop of Limerick, WITH SOME INTRODUCTORY REMARKS BY SIR S. FERGUSON, President.

[Read, May 26, 1884.]

THE Bishop of Limerick has done me the honour of making me the medium of several valuable communications to the Academy on the subject of Ogam interpretation. He is good enough to continue the use of my services in this way, and to-night enables me to make public his views on a matter which, up to the present, has much perplexed the study of Ogam legends. I refer to the Greekish aspect of many of the names, and to the seeming want of distinction between the nominative and the genitive. I may observe that I have long regarded *Magi*, the recognized equivalent of *filii*, as having an equally good claim in some of these enigmatical epigraphs to stand for *filius*. Besides his observations on the -os termination, Bishop Graves issues two new propositions to the eye of Archæological curiosity in disclosing resemblances between the form of the Celtic cross, as well as the style of Irish decorative work in manuscript, and other examples of both kinds seen by him in a quarter of the world hitherto little taken into account in these investigations.

“ May 12, 1884.

“ MY DEAR SIR SAMUEL FERGUSON,

“ I am about to present to the Royal Irish Academy an Ogam monument which will, I trust, be regarded as a valuable acquisition to our lapidary collection. It was found in 1877, near Killorglin, by an intelligent young man named Fitzgerald, whom I had imbued with a taste for antiquities, and thus fitted him to explore that part of the country in search of Ogam and other ancient remains.

“ The inscription which this monument bears is complete and perfect. Not the slightest doubt can be entertained as to any single character included in it.



“ It reads as GALEOTOS. Now as to this name, I observe first that *Galea*, a galley, was used in mediæval Latin to denote a long, low-built ship, *genus navigii velocissimi, navis longa, navis rostrata, liburna*, &c., employed as a privateer or piratical craft, and the men who formed its crew were called *Galeoti* or *Galiota*. They were held in very low estimation, and classed along with pirates and robbers. *Viles erant Galeoti, nulliusque nominis*. Alfred the Great had a fleet of such galleys built, and manned them with *pirata*.

“ So much for the meaning of the name Galeotos.

“ Next, I shall have something to say respecting the final -os, which has been supposed by philologists to be the termination of a Celtic genitive. If it had really been one, might we not have expected to find examples of such forms in the Irish of the Book of Armagh and

in other ancient Irish writings? I never believed in this theory, and now I am in a position to show how this -os came to be used as the termination of Ogam genitives. It is true that in mediæval Irish texts we find instances showing that pedantic scribes gave the termination -os to names which were Latin, and ought to end in -us, such as *Postomios*, or *Beallinos* for *Belinus*, or *Embros* = *Ambros* = *Ambrosius*, or to names which were purely fictitious, such as *Rochimurchos*, *Ordinos*, *Judamos*, and the sons of Adam (!) *Gismos* and *Gamos*. Nay, more, I am willing to admit that I have met with instances in manuscripts in which Celtic proper names in the nominative have been made to end in -os, such as *feap̃ɣɔɹ*. But these will not be found, as I believe, to support the theory which I am disputing.

"I hold fast to my original view, stated thirty-five years ago, that the Ogam was an invention of the early monkish period. Irish proper names occurring in Ogam inscriptions were frequently disguised by giving them the Greek termination -os; and this was done by persons who did not know how to inflect Greek proper names, or who were in the habit of using them without inflection. But I may be asked, Were there any such persons? I answer, *Yes*. In Coptic, Greek proper names ending in -os, were invariably used without being declined, and the same rule was observed in the case of loan words of other kinds borrowed from the Greek. For instance, *σταυρός*, a cross, is never declined. Any person who wishes to satisfy himself as to the truth of what I say can readily test it by taking up a Coptic prayer-book, or a portion of the Coptic New Testament, containing Greek proper names. And the same thing is to be observed with reference to the use of Greek names in Arabic, Syriac, and Aramaic.

"But what have we to say to Coptic usages, linguistic or of any other kind? A great deal. In times of persecution Egyptian monks fled to Ireland, bringing with them their speech, their art, their ecclesiastical usages. In the Litany of *Ængus* mention is made of seven Egyptian monks buried in one place. Doubtless there were many more who came to this country. I hope to be able to show that they have left not a few traces of their influence. In Upper Egypt I have recognized several forms of cross which we regard as Irish and ancient Irish, and some of these are identical with crosses found on Ogam monuments. Take, as an instance, the very peculiar cross which appears on one of the Ogam monuments near Dingle . The cross in a circle , either with or without pellets in the quadrants, is to be seen in the ruins of early Christian churches all along the Nile from Assouan to Cairo.

"Here I must stop for the present, but I shall have more to say by-and-by about the final -os, and the resemblance between ancient Egyptian and ancient Irish crosses.

"Believe me to be, my dear Sir Samuel,

"Very faithfully yours,

"C. LIVERICK.

"SIR SAMUEL FERGUSON."

## "POSTSCRIPT.

"I ought also to remark, that if -os was the termination of an ancient Celtic genitive, the same might be said of -as, which appears as the termination of just as many Ogam names, all of which may be said with equal reason to be genitives; but if my view of the matter be correct, both of these terminations might have been naturally suggested to the minds of the persons who exercised their ingenuity in giving cryptic forms to the Celtic names which they inscribed on Ogam monuments, if these seanachies had been acquainted with the forms of the Greek and Hebrew proper names occurring in the Coptic or other Oriental versions of Holy Scripture.

"If this question as to the origin and use of the Ogam termination -os could be settled by the evidence of a single inscription, I might be contented to refer to one of which I gave an account to the Royal Irish Academy in the year 1856. On that occasion I described a monument found by the Rev. James Goodman near Ballywiheen, in the county of Kerry, and bearing the inscription

TOGITTAGO MAQI SAGARETTOS,

which I interpreted as

TOICTHEACH FILII SACERDOTIS.

"Now, I can hardly believe that any scholar will question the following etymological equivalence:—

Sacerdos = Sacerd = SΔΣΔϣτ = Sagarettos.

"If the process of derivation thus indicated be correct, this SAGARETTOS, so far from being a genuine primeval Celtic word, is nothing more than an Irish noun or proper name of a comparatively late period, pedantically disguised by a Greek termination; and its want of genuineness is but little aggravated by the fact that the word with the nominative ending is made to do duty in grammatical regimen as a genitive. But as I have been led to notice this inscription, I may be allowed to refer to it as furnishing an instance of one of those artifices by which proper names were metamorphosed with a view to render the reading of them difficult to the uninitiated. As I identify TOGITTAGO with TOICTHEACH, you will perceive that I regard the duplication of a consonant as intended in certain cases to denote its aspiration or some other kind of modification. I shall be able to adduce other instances of this kind, such, for example, as oo for e, bb for p, dd for dh.

"What I have said with respect to the similar forms of the cross found in Ireland and Egypt must be developed by a comparison of the sketches in my note-book with the drawings made by Mr. Du Noyer, Mr. Wakeman, and others; but by far the most interesting of the results which I shall have to communicate in connexion with this



subject will be deduced from a comparison of the methods of ornamentation exhibited in the Coptic Gospels and service-books with those of which we have such fine examples in our Irish Ecclesiastical MSS.

"There are two other points deserving notice in this inscription (Togittacc).

"First, the inversion of letters consequent upon the separation of vowels composing a diphthong which appeared in the name when spelt in the common way. The *o* and *i* are separated in TOGITACC, instead of being left together, as in TOICTHEACH. This artifice is frequently used in Ogam as *e. g.* in CURIMITIRROS = Cpuimhter, and the reason for the practice is obvious enough. As all the vowels were denoted by groups of similar short strokes, varying in number from one to five, the juxtaposition of two such groups might have the effect of introducing a character of ambiguous power. Thus ~~-----~~ might stand for *oi*, or *ue*, or *eu*, or *io*, and so on.

"The Uraicept tells us that there were five varieties of the *Berla tobaid* (the language formed by selection or abstraction). Of these, one was the *Berla Edarscartha* (the language in which the chief letters, the vowels *a, o, u, e, i*, were separated). I suspect that this was not a dialect, but merely a pedantic mode of writing words so as to separate the vowels which entered into the diphthongs used in the ordinary orthography.

"There is another point to which attention may be directed in the discussion of this inscription. *Sacerdos* may be either a common noun or a proper name. But I think it is more probably a common noun. I cannot remember any instance in which an Irish ecclesiastic bore the name *Sacerdos*, but it was borne by a British presbyter who attended the British bishops present at the Synod of Arles in 314. If it were a common noun, we could see a reason for the use of a cryptic mode of writing in the record of Toictheach's paternity. Toictheach was an old Irish name. We find in the *Martyrology of Donegal*, FINNTAIN, son of TOICTHEACH (Jan. 2), and TOICTHEACH (a saint) (Nov. 16). In the Annals of the Four Masters mention is made of two persons of this name: one at the year 808, Abbot of Armagh—Colgan says of him *Colitur 16 Octobris*; the other at the year 895. As he is said to have been of Inis Aingin, he was no doubt an ecclesiastic.

"You must not suppose that I have Egypt and Copts so much upon the brain that I am inclined to believe that the Ogam was invented in the land of the Pharaohs. As at present advised, I give the credit of the invention to my own country. I found no Ogam in Egypt.

"C. L."

XLV.—ON THE IDENTIFICATION OF THE PROPER NAMES APPEARING ON TWO MONUMENTS BEARING OGAM INSCRIPTIONS. By the RIGHT REV. CHARLES GRAVES, D.D., Lord Bishop of Limerick.

[Read, June 24, 1884.]

IF, as I maintain, the Ogam is a cryptic character, intended to be intelligible only to the initiated, and if the names written in it on ancient monuments are further disguised, as I am prepared to show, by transformations of various kinds, we need not be surprised or disappointed if we succeed only rarely in identifying the persons of whom so obscure a record is preserved in these mysterious memorials. I propose in this communication to give an account of two Ogam monuments, in the expectation of being able to convince the members of the Royal Irish Academy that we are able, with something approaching to absolute certainty, to identify the persons whose names they bear.

I.

The first which I shall notice is a monument which stands in the churchyard at Aghabulloge, near Macroom, in the county of Cork. It has always been known and held in great veneration as St. Olan's Stone. Mr. Brash has pronounced that the inscription, so far as it is legible, has no reference to that saint. It must be confessed that it was not easy to discover the clue by which we are led to an opposite judgment.

In the first place it must be noticed that the name *Olan* is not to be found in that form in any ancient list of Irish saints. The correct spelling of it seems to have been *Eolang* or *Eulang*. A saint of this name, called also Eulogius, is recorded as having been preceptor to St. Baire (Finnbarr), of Cork. The name *Eolang*, occurring at the 5th of September in the Martyrology of Donegal, is followed by a blank space, which seems to indicate that the author was uncertain whether *Eolang* was a priest or bishop. He is said to have lived at Achadh-bo-Cainnigh, in Ossory. In the Life of St. Finnbarr there is a notice of him, from which we gather that he was the preceptor of that saint, and that he was one of a company of twelve persons who accompanied him in a pilgrimage to Rome. Even if we disbelieve the story that he was a hearer of Gregory the Great, it is plain that he must have been a man of learning as the instructor of St. Finnbarr, and holding a high place in a brotherhood of distinguished ecclesiastics.

The next step in my argument is to show that *Eolang*, the preceptor of St. Finnbarr, was also known by the name of *Maccorbis*. For this we have the authority of the writer of the Life of St. Finnbarr, who says:—*Legitur quod Sanctus Maccorbis, Sancti Gregorii olim auditor, fuerit S. Barri institutor*. We are now in a position to

assert that the monument under consideration, known as St. Olan's Stone, was the monument of Maccorbuius, the teacher of St. Finnbar. And this is in accordance with the Ogam inscription which the stone presents. I read it thus:—

ANM CORRPMAG SUIDD . . . M[A]PTT.

The original drawing, made by Mr. Richard Hitchcock, and compared by myself on the spot with the inscription on the monument, exhibited three distinct strokes following the q, and a fourth faint one where the stone appears to have been injured by abrasion. There is exactly room for the fourth stroke of an s between its third stroke and the first of the u.<sup>1</sup> After the dd there is room for about ten strokes. There may have been some vowel strokes on this part of the edge. But there is no appearance of consonantal characters on either face of the stone. After this space comes what I take to be m.<sup>2</sup> After it I read a, with some, but very little, doubt. Across the second r a line was drawn as if to cancel it. I cannot remember to have seen any other example of this mode of effacing a character, and I therefore suspect that this cross stroke ought not to be taken account of as part of the inscription.

There is difficulty in dealing with the final part of the inscription. It appears to end with aprr, which may mean *apait*, *abbatis*. This conjecture is supported by the fact that I can refer to another Ogam inscription which appears to end with aprr coming after a proper name.

When first I recognized this formula ANM, with which this and several other Ogam inscriptions commence, I expressed my belief that it stood for the word *anmain*. A prayer for the soul of the deceased was the commencement of many ancient inscriptions, and on that account this explanation may be regarded as more probable than any other. But I do not cling to it with obstinacy. As we have seen that ancient Irish writers constantly speak of a man's *Ogam name* being inscribed on his sepulchral monument, I am prepared to admit that the formula ANM may represent the word *ainim*. Each legend commencing thus would in that case mean the [Ogam] name of the person commemorated.

The next part of the inscription is CORRPMAG, which I take to be equivalent to MACCORBUI. Such transpositions of the parts of compound names were not unexampled.

This is followed by SUIDD, which I take to be the genitive case of *suid* (sapiens), with the final letter aspirated by duplication.

<sup>1</sup> Sir Samuel Ferguson, who has kindly allowed me to see his transcript and paper mould of the text, reads r where I read s, and regards SUIDD as equivalent to ruir, or the *roi* (*qui fuit*), to which I was the first to direct attention as a formula occurring in other Ogam inscriptions.

<sup>2</sup> Here Sir Samuel Ferguson reads o. I question this reading, because there is no sign of the first oblique stroke of the c having crossed the edge of the stone.

For APTT, I can suggest no other explanation than what I have already mentioned. The whole inscription would thus receive the following interpretation:—

*Animd or Nomen Maccorbii Sapientis . . Abbatis.*

I have no proof that Maccorb was an Abbot, but as he was probably the head of the body of learned men assembled at Cork in the time of St. Finnbarr, it is not unlikely that he was the Abbot of a Monastery in the neighbourhood. St. Finnbarr died about the year 623. The death of his preceptor, who we may assume was his senior, may therefore be placed about A.D. 600, and this, no doubt, is the date of the inscription.

But it may be asked, Why was the name of this distinguished ecclesiastic written in a cryptic character? We know almost nothing of his character or history. It is possible that some stain of discredit rested on his conduct or birth. It is true that pilgrimages were frequently undertaken as exercises of religious devotion, but they were also enjoined in the way of penalty for sins committed.<sup>3</sup> Eolang may have made his pilgrimage to Rome for a reason of this nature. St. Columbkille and St. Brendan, much more distinguished saints, went into pilgrimage in expiation of sins or crimes brought about by their acts or influence. Or, again, there may have rested upon his origin some blot, such as disgraced the birth of the saint on whose history I shall have to touch in my description of the other monument to be noticed in this Paper. Allusion to this may have been made in the name Maccorb, or Corbmacc. The celebrated king and bishop who bore that name tells us in his Glossary that it was properly spelt with a *b*, and meant *the son of a Chariot*, that is to say, a person born in a chariot. The King's derivations were not unfrequently incorrect; and in this particular case we may imagine that he was disposed to give a favourable rather than an unfavourable interpretation to his own name. I cannot help suspecting that the other mode of spelling, viz., with a *p*, suggested the true etymology, with a reference to sin. The name Cormac is said to have been equivalent to Aithgen; and I can adduce passages in which the idea of something abominable or sinful is connected with the name *Corbmacc* or *Coirphti*.

[See Colgan *AA. SS.*, pp. 221, 607; *Martyrology of Donegal*, at Sept. 5; Lanigan's *History*, vol. ii. p. 313–315; Ussher, *Index Chronol. ad Ann.*, 630.]

## II.

At Cynffic, near Margam, in Glamorganshire, there used to stand a monument bearing a nearly defaced Ogam inscription, which I examined in the year 1849. The Ogam characters are not so

<sup>3</sup> See the *Canons of St. Patrick* in Ware, and *Canones Hibern.*, lib. 28, cap. 6.

well preserved as to encourage the antiquary to conceive hopes of making a successful attempt to read them. But just enough remain to warrant him in asserting that the monument originally bore a bilingual inscription, the Celtic part of which, cut on the edges, bore some relation to the part traced in perfectly legible Roman letters on the face of the stone.

Beginning with the latter, I shall afterwards proceed to say the little that remains to be said with any certainty respecting the Ogam characters.

The inscription in Roman letters is to be read as follows:—*PVMPETVS CARANTORIVS*. Professor Rhys, indeed, not taking into account that the *v* and *m* in the first name form a not uncommon ligature, reads it as *PVNPEIVS*. Mr. Westwood and Mr. Brash have done the same. This, however, is a matter of small consequence. The name indicated was no doubt the Roman name Pompeius. We are told by Professor Rhys that it does not appear elsewhere on Welsh ground.

As to the second name, *Carantorius*, I do not hesitate to identify it with the Celtic name *Carantacus*, or *Carantocus*, or *Cornachus*, of which the Irish equivalent is *Cairnech*. My argument may be represented by the following formula:—

*Carantorius* = *Carantocus* = *Carantaous* = *Cornachus* = *Cairnech*.

There were two *Cairnechs* who must be distinguished, both of them Britons, and both noticed in Irish Hagiology. The elder is said to have been a nephew of St. Patrick, and to have taken part in the compilation of the *Senchus Mor*. A Latin life of him exists in *ms.* in the British Museum (Vesp. A. xiv., fol. 90), and has been edited by the Rev. W. J. Rees, in his *Lives of the Cambro-British Saints*. Either the Latin text is very corrupt, or it has been sadly misread and mistranslated. However, all that concerns my present purpose is to notice that the Latin name of this *Cairnech* was *Carantocus*, and in one passage it appears as *Cornachus*. He was a native of Cornwall, and, as we learn from Dr. O'Donovan, is still remembered as the patron saint of Dulane, in the county of Meath. His day in the Calendars of the British and Irish Churches is the 16th of May. He died in Ireland most probably towards the end of the fifth century.

But there was another *Cairnech*, of whom a full account has been preserved in an ancient and curious document entitled the "*Miracles of Cairnech*," incorporated in the *Irish Version of Nennius*, as edited by Dr. Todd. Although this document has a somewhat legendary character, its statements respecting matters of civil history, and the relationships of the persons mentioned in it, are not to be treated as mere inventions, many of them being confirmed by authentic testimonies of various kinds.

The *Cairnech* whose history is given in it was the son of *Saran*, styled King of Britain. According to a genealogy given in the Book of Lecan, *Saran* was son of *Colgan* or *Colchuo*, son of *Tuathal*, son of *Fedhlim*, son of *Fiachra Cassan*, son of *Colla da Crioich*. He probably

reigned about the year 500 or somewhat later. Erca, daughter of Loarn, King of Scotland, appears to have been Saran's legitimate wife; but when she eloped from him with Muirheartach mac Eogain, grandson of Niall of the Nine Hostages, Saran took to wife her sister, whose name was Pompa or Bebona, by whom he had four sons, Luireg, Cairnech, Bishop Dallan, and Caemlach. Of these, Luireg, the eldest, having succeeded to his father, was murdered at the instigation of his brother Cairnech, by Muirheartach mac Erca, King of Ireland, the son of Erca, Cairnech's aunt. In the latter part of her life, after she had been united to a third husband, Fergus, son of Conall Gulban, she became a penitent, and having placed herself under the ministrations of her nephew, Cairnech, bequeathed to him a territory, from the history of which we gather the means of ascertaining the date of his death. He must have died before the year 545, if we take the dates of O'Flaherty, or before the year 539, if we adopt with Colgan the chronology of the Four Masters. Colgan has given us a life of him at the 28th of March, which was kept as his festival.

It is with this Cairnech I identify the Carantorius of the monument. In the first place, I regard the difference between the terminations of CARANTORIUS and CARANTOCUS as of little consequence in a case of this kind. The persons who latinized the names of Celts were free to do so in an arbitrary manner, consulting their own taste or fancy. In the instance before us we have seen that the same Cairnech is called CARNECHUS and CARANTOCUS, names which appear more different from one another than the latter is from Carantorius. It would be easy to multiply examples of the same kind. The Latin name of Ronan was Phocas or Phocianus. Muiredhach was called *Pelagius*, and *Marianus Muician's* name was translated into both Porcianus and Subulcus.

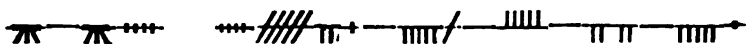
But next, I regard the fact that the name of Cairnech's mother was Pompa, as almost certainly completing his identification with Pompeius Carantorius. The coincidence is so remarkable as to fall little short of demonstration. If it had happened that the inscription which we are considering had presented to us nothing more than PVMPEIVS CARANTO . . . , the identification would probably have remained unquestioned. As the matter stands, I see no reason to abandon my conjecture until some Briton is found who has a better right than Cairnech to the *two* names Carantorius and Pompeius.

I fear it may be thought a waste of time for me to notice the observations made by Mr. Brash on this monument. His copy of the Ogam inscription is tolerably accurate, so far as regards the characters which still remain legible, but he has not correctly indicated the spaces between them, and he has fallen into the error of reading the inscription upside down. He differs from Professor Rhys and me in his conclusion that "the monument is not bilingual." "The inscription in Roman letters," he says, "is in no way represented in the Ogam." To this he was probably led in consequence of his having

assumed that the character  $\pi$  was intended to represent *rr*. In the first plate of his own facsimiles of Ogam alphabets, made from the Book of Ballymote, he might have seen that it was used to denote *p*.

Professor Rhys showed more sagacity. Knowing that in other bilingual inscriptions found in Wales the Ogam name corresponded with the one written in Roman letters, he correctly assumed that the symbol  $\pi$  appearing twice in the beginning of this Ogam inscription stood for *p*, holding the same places in Pompeius. His conjecture was in the highest degree probable, and, as I have just stated, it is confirmed by the evidence of the Book of Ballymote. Amongst the monogrammatic signs used in the Book of Ogams to represent syllables and words, we find this very symbol  $\pi$  given for *p*, which had no single character originally assigned to it in Ogam. A double *b*, that is to say, an aspirated *b*, as we learn from the Uraicept, was used to denote this letter. From this, that is from  $\top\top$ , it seems probable that Ogam writers were led on to the use of  $\times$  or  $\times$ ; and finally, the character  $\times$  was made to perform a double duty, both as *ea* and *p*. In the Book of Ogams we find that the symbols of both *is* and *ui* stand for *p*.

Professor Rhys thinks that the Ogam inscription began with the letters *porr*. . . . . When I examined the monument I failed to ascertain the existence of any other letters besides the two *rs* on this side of the stone. Between them I thought there was room for the three strokes required to make the letters *om*. The Ogam inscription being nearly effaced, I can only regard the following letters as certainly remaining. I have roughly indicated the length of the spaces between them.



Even with the help furnished by the Latin inscription, it would be mere guess-work to proceed further in an attempt to supply the missing characters beyond the restoration of the probable *maqr*.

I have elsewhere called attention to the testimony of Mr. Curtin, who states that things discreditable to the memories of distinguished persons were recorded by inscriptions in the Ogam character on their monuments. There might have been occasion for this in the case of St. Cairnech. He was the offspring of incest, and was answerable for the murder of his brother. These stains upon his reputation are recorded by the writer, who nevertheless eulogises him as an exemplary bishop, concentrating in his person every ecclesiastical perfection.

[See, with reference to the elder *Cearnach*, the nephew of St. Patrick, commemorated on the 16th of May, Colgan, *AA. SS.*, pp. 263, 473, 756, 783; Colgan, *T.T.*, pp. 227, 231, 266; *Martyrol. of*

*Donegal*, at May 16; *Irish Topographical Poems*, edited by Doctor O'Donovan, p. xiv., note 60; *Senchus Mor*, vol. i., p. xviii.—xix.: with reference to the later Cearnach: Colgan, AA. SS., pp. 473, 782 (the life of this saint), 753, 756; Lanigan's *Church History*, vol. i., pp. 494, 495; Adamnan's *Life of St. Columbkille*; edited by Reeves, p. 329; *Irish Nennius*, pp. 179–193, and ci. to cxi., *Mart. of Donegal*, at 28th of March; O'Flaherty's *Ogygia*, p. 470.]



**XLVI.—DESCRIPTION OF A PERFORATED BALL OF ROCK CRYSTAL STATED TO HAVE BEEN FOUND IN THE COUNTY MEATH, WITH NOTES RESPECTING ROCK CRYSTAL GLOBES OR SPHERES, THEIR LEGENDARY HISTORY, ALLEGED MEDICAL AND MAGICAL POWERS, AND PROBABLE EASTERN ORIGIN: ALSO ON THE USE OF ROCK CRYSTAL FOR ORNAMENTS OF IRISH SHRINES AND RELIQUARIES.** By WILLIAM FRAZER, F.R.C.S.I., M.R.I.A.

[Read, May 18, 1884.]

TRANSLUCENT Rock Crystal, as a mineral, is well known under its name of Irish Diamond, forming an ordinary essential component of our granite rocks, yet it seldom occurs here in sufficiently limpid masses and in pieces of adequate bulk to be turned to useful artistic purposes. The best and clearest specimens are obtained in the form of rolled pebbles, on the sea shore, at the North of Ireland, where they are locally termed "Dungiven Crystals." We also obtain well-formed crystals of large size from Donegal, but they are a dark-brown coloured variety known as "Smoky Quartz"; this variety is often cut and polished by seal-cutters under the appellation of cairngorm, a name that should be restricted to a different substance, namely, the topaz.

Rock crystal was so often procured from the peaks of lofty ice-covered mountains that its formation in early times was ascribed to the protracted freezing and solidifying of water, which theory receives grave discussion and reprobation by Solinus, a fact duly recorded by Polydore Vergil in his History.

The spherical bead of limpid rock crystal now exhibited by me to the Royal Irish Academy is a moderate sized, but fair example, of this special well-recognized class of manufactured objects much prized in our collections of antiquities, which from time to time turn up unexpectedly in different parts of the British Isles, or are ascertained to be in the possession of families by whom they are regarded as precious heirlooms; some of those have long transmitted traditional histories of respectable duration, and have gathered a fair amount of legend around them. They are valued for alleged wonder-working power over the diseases of men and animals; and, stranger still, their owners even claim that by their means we are afforded deep insight into futurity; hence they supply the novelist with useful material for the exercise of his imagination, as readers of Sir Walter Scott's "Talisman" are well aware; for the interest in the "Talisman" is largely due to a miraculous amulet, the "Lee Penny," which, however, is not composed of rock crystal, but of a dark-red stone, set in a groat of Edward IV. According to tradition it was brought from the Holy Land in the 14th century, by Sir Simon Lockhart, of Lee; to which place and time the traditional history of many of these crystal balls in our countries is popularly ascribed.

With reference to the special bead now exhibited, I regret to say

there is neither any ancient legend or traditional supernatural claims to produce; like the needy knife-grinder "Story I have none to tell, sir." The bead may be endowed with properties rendering it a panacea for colic and several additional maladies, or it may be quite as well qualified as other crystal balls, described by me, to cure cattle-plague and stamp out foot-and-mouth disease, better than modern Acts of Parliament or a Privy Council order, though I cannot lay claim on its behalf to these distinctions, for the bead has never received a fair trial since I became its owner. Or it may be powerful to foretell fortunes and reveal passing events, similar to Dr. Dee's magic mirror: but I fear we would require the assistance of a pure-minded person to succeed with the divination, who might possess the rare and needful qualifications which would enable him to understand the hidden meaning of that filmy evanescent moisture which deposits on quartz, in common with all cold surfaces, when it is brought into warm and damp rooms; and who would further have sufficient faith and imagination to interpret, in a manner capable of satisfying others, what those particles of deposited dew meant, and compel them to yield up their concealed Cassandra-like predictions.

Some months have elapsed since I purchased this bead, and I was given to understand it was brought from one of the midland counties, I believe Meath, where an itinerant dealer procured it from the person by whom it was found: he could tell nothing of the circumstances under which it had turned up. Compared with the crystal spheres in this Academy its dimensions are moderate, being twenty-seven millimetres in diameter; the rock crystal composing it is clear, translucent, almost limpid, and the sphere is perforated by an aperture of large size, five mm. wide; when the bead is placed on end, and this perforation viewed from above downwards, the rapid expansion of the cylindrical tube into a cone might, without difficulty, be regarded as somewhat supernatural and not altogether canny: and it is easy to understand the influence of such an idea upon the untutored mind of an individual living one or two thousand years ago; for some of these crystals lay claim to histories of long duration, though I am convinced several are not entitled to it, nor can they give adequate proofs of such remote antiquity; and there are good grounds for concluding that identically similar balls of rock crystal continue to be manufactured in the East, in China, and Japan, even to the present day.

On referring to the Catalogue of our own Museum, which recalls to us the labours of Sir William Wilde, and forms a lasting monument of his archæologic skill, we find these interesting crystals received from him due attention, and he offers us a clear and satisfactory account of them. Of true crystal balls we now possess three specimens.

No. 1 measures in girth  $6\frac{1}{2}$  inches; it originally belonged to the Scottish family of the Campbells of Craignish, Argyleshire; the large crack noticed in it is reported to have been caused by its owner dropping it on a hearthstone. It came into the Museum several years since, and is traditionally asserted to have appertained at one time to

the Scottish regalia. I have failed to verify this statement, and do not consider that the slightest grounds exist for such a legend.

No. 2 measures in girth  $5\frac{1}{4}$  inches. This crystal ball was found at Upper Cross, in Co. Kilkenny. Its form is not that of a perfect sphere, and it has numerous flaws.

No. 3 has a girth of  $4\frac{1}{2}$  inches, and is encircled by four slender decorated silver straps, looped at one of the points of intersection. It was formerly in the possession of the late Mr. Boylan, of Grafton-street, and is described in vol. vii. p. 128, of our *Proceedings*.

To these I would add descriptions of the following:—

No. 4. A magnificent specimen, free of blemish, and measuring no less than  $9\frac{1}{4}$  inches in girth. Owing to the kindness of T. Longfield, Esq., M.R.I.A., its possessor, I am permitted to exhibit it this evening. This exceptionally fine ball surpasses in size all I have yet seen. Mr. Longfield bought it some years since, and considers it of undoubted Eastern origin.

No. 5. A sphere which is described in *Notes and Queries*, Fifth Series, vol. v. for 1878; it measured 5 inches in diameter, and its weight is stated to be 6lb. 3oz. There is no history belonging to it.

No. 6. Another crystal sphere, which was exhibited in the Dublin Exhibition of 1853, by Lord Rossmore. In the Catalogue, p. 153, it is described as having been found in a bog; its measurements are not recorded.

No. 7 (Continental). Prof. G. Stephens, in the 3rd Part of his great work on Old Northern Runic Monuments, which is just published, describes, p. 109, the exploration of certain early interments at Frei Laubersheim, a Rhein Hessian village, in the year 1873. The skeleton of a lady was found, buried in one of these graves, and interred with it a pair of silver brooches, one of them having a Runic inscription, of which he gives an engraving and translation: the tomb also contained two cloak-pins of gilt silver, two bronze shoe-buckles, a large buckle of iron, a glass goblet, and a *large globe of rock crystal*, together with several other articles. According to Prof. Stephens the Runes record she was a priestess, and he therefore draws the natural conclusion that the "large and costly crystal ball" may have served for "her official priestly showstone or magic mirror or consulting glass, so well known to students of occult lore, and of which several specimens have been found in ancient graves." This is an important specimen with reference to the earlier history of crystal spheres, for the date of the interments is considered by competent judges to be about the sixth century.

The list will be more complete when we include the following references to certain rock crystal spheres found in Scotland; for which purpose we would refer to a Paper of Sir James Simpson's (*Proc. Soc. of Antiquaries of Scotland*, vol. iv.): treating of "Scottish magical charm stones, or curing stones," he describes—

No. 8. Clach na Bratach, the Stone of the Standard, belonging to Struan Robertson, the head of Clan Donnachie. This crystal, which

he gives a figure of, measures about 2 inches in diameter. Its legendary history commences previous to the field of Bannockburn, when it was discovered one morning in some clay adhering to the clan's flag-staff; of course, this presaged victory, and ever after it accompanied the chieftains in their battles, and the varying hues of the crystal were consulted for augury. On the eve of Sherriffmuir, Nov. 13, 1715, a large flaw was noticed in it. The cause of the Stuart kings was lost, and since that disastrous day the power of Clan Donnachaidt has declined. Popularly it had ascribed to it the property of curing diseases in men and cattle who drank of water into which it had been dipped; but, to secure this result, it was indispensable that the chief of the clan should operate as dipper.

No. 9. Clach Dearg, the Ardvoirlich Stone, possessed by the family from early times, and traditionally supposed to have come from the East. It is set in four intersecting silver bands, with a loop for suspension similar to one of the specimens in our collection, and those bands are alleged to be of Eastern workmanship. Its healing properties were always held in high repute, particularly for cattle. The person who required its assistance was obliged to draw the water himself, and bring it into the house in some vessel into which the stone was dipped, a bottle was then filled with the water and carried away; but if, through mischance, its bearer entered any house with the water, whilst conveying it home, all its virtues were supposed to depart immediately.

No. 10. Sir Jas. Simpson describes a crystal which was the property of the Campbells of Glenlyon, a roundish or ovoid ball, about  $1\frac{1}{2}$  inches in diameter; this also was protected by a silver mounting. To render its medicinal influence effectual, it required to be held in the hands of the laird when dipped into water.

No. 11. The amulet of the Bairds of Auchmeddan, also preserved in a silver setting, which has a comparatively modern inscription, claiming for it a legendary history reaching so far back as 1174. It is not a crystal ball, but composed of "Black-coloured flint," and I mention it because by an intermarriage with the Bairds it became the property of persons of my own clan, the Frasers of Findrack.

Sir W. Wilde discriminates between the true polished spherical balls of rock crystal and sections of such spheres which he also describes: these were employed to decorate ancient works of art such as shrines and reliquaries, in which the crystal polished disk may vary in size from the bulk of a marble to that of a small orange: furthermore, there is a third class of crystals, far more numerous than sections of spheres, and likewise much employed in early jewellery, namely, rock crystals, cut *en cabochon*, or with the sides laterally compressed, so that they assume a scaphoid form. Of both forms we possess a rich store in our collection. Thus, for example, in the cross of Cong we have a section of a sphere of rock crystal inserted in its centre part.

There is another good example of polished rock crystal employed for the purpose of art decoration, in the form of a section of a sphere,

set in the centre of the foot of the beautiful "Ardagh Chalice," where it is surrounded by settings of amber and filagree work; this part of the cup was highly ornamented, because, when not in use, the vessel would be placed in an inverted position. I refer for a full description of the chalice to the Earl of Dunraven's Paper, contained in vol. xxiv., of the Royal Irish Academy's *Transactions*, and to the coloured illustrations which accompany the Paper.

In the Cathach of the O'Donnells there is a half-sphere, four compressed boat-shaped crystals, and one empty cavity, from which the stone has dropped out.

On the cover of the Stowe Missal there is a boat-shaped crystal of large size, and two oval crystals of smaller magnitude. In the shrine of the Fiacul, or Tooth of St. Patrick, there is inserted a section of a sphere.

Besides those mentioned we possess several interesting reliquaries, of different sizes and classes of workmanship, the ornamentation usually consisting of silver setting, decorated with the characteristic boat-shaped crystals. It has been suggested that this special shape is symbolic of the "Vesica," but I do not purpose at present to consider the cabochon crystals, and therefore abstain from discussing the possible religious ideas so conveyed. Suffice it to say that one of these reliquaries of early age is surmounted by a crucifix of archaic design, probably belonging to the 14th century, and would itself deserve a careful investigation. In another reliquary a rude uncut crystal of Irish diamond replaces the polished stone; and in another still we find the crystal imitated by a setting of ordinary glass. To avoid any error, let me here state that I have not examined these boat-shaped crystals with a view to determine their location as minerals; some may be of Irish manufacture, others made in early ages on the Continent, where rock crystal has long been fabricated into elaborate works of art; but I believe the sections of true spheres, like the crystal balls, will be found to belong to the East essentially.

The veneration in which rock crystal spheres were held will account for their forming portions of regalia; and in Ireland, as well as Scotland, certain families have preserved them for ages; and the Irish peasant and farmer have sought their assistance to ward off and cure disease—especially when attacking the cattle.

No. 12 is a good illustration of such a sphere, celebrated for its medicinal and magical powers. It is in the possession of the Marquis of Waterford, and the tradition regarding its ancient history is that it was brought from the Holy Land by one of his Le Poer ancestors during the period of the Crusades. The curative properties of this sphere were eagerly sought after even for remote districts, in order that when placed in a running stream they might drive the cattle backwards and forwards through the water, by which means a cure was said to be obtained, or threatened disease could be warded off; or simpler still, the cattle drank from water in which the ball was immersed.

The property of foretelling events by the assistance of these crystal

globes has obtained believers down to our own times. So late as 1862, there was a trial in the Queen's Bench in England, where an action for damages was brought by Mr. R. J. Morrison, better known as Zadkiel, the proprietor of a "Prophetic Almanack," against Admiral Sir Edward Beecher, who wrote a letter to the *Daily Telegraph* which Zadkiel considered injurious. It would appear the crystal in question (No. 13) was bought from a dealer who said it had formerly belonged to the Countess Blessington. Zadkiel preserved it in a puce-coloured bag, and produced it in Court, drawing the globe with much reserve from its retirement with a blue ribbon (a procedure, I regret to say, which is described as productive of irreverent laughter). He told the Court that with this ball he could foretell futurity, and had obtained four qualified seers capable of looking into the globe with success. One of these immaculate individuals was his own son—though the father modestly did not advance a personal claim. Several persons of distinction were produced in Court as witnesses, or cited as having seen the magical proceedings. The list included numerous lords, the Bishop of Lichfield, Baron Bunsen, and Lord E. B. Lytton. Some of these individuals, who were personally examined, could only say they saw nothing in the crystal except numerous cracks. Zadkiel got a verdict for 20s. costs, as it was not proved he had obtained any money under false pretences—in fact he had never asked for it; but sceptics might inquire why his gifted son could not foresee the termination of his father's lawsuit—a much simpler matter to predict than the fate of Sir John Franklin and his Arctic expedition. This globe of crystal was about 4 inches in diameter and full of flaws.

Mr. Longfield informed me he thought the fine sphere which he has brought from the East, either Japan or China; and I owe to him conclusive evidence that the Chinese are also fabricators of counterfeit globes of ordinary glass; for one of these imitations fell into his hands, and, being suspicious of its real nature, he had it examined and tested by Dr. Moss, in the Royal Dublin Society. It had been presented as a valuable gift by a Chinese merchant to its possessor, who either had it mounted or obtained it already mounted upon a stand of silver, and always regarded it as composed of veritable rock crystal, and therefore very valuable, until undeceived as to its composition in Dublin.

This information led me to seek for further knowledge on the question, and I found in Mr. King's *Work on Antique Gems*, vol. i. p. 373, a distinct statement that balls of rock crystal are still utilized in Japan to keep the hands cool in sultry weather—a practical use to which they were also applied in the days of Imperial Rome—for Propertius has two distinct references bearing on the point, which Mr. King quotes:—

"Now courts the air with plumes of peacock fanned—  
Now holds the flinty globe to cool her hand."

—(II. 24.)

Again :—

“ O what avails the Punic purple rare,  
Or that my hand the limpid crystal bear.”

—(IV. 3.)

If it were needed to have additional confirmation of the use of balls of crystal by the Romans, we may refer to a brief Paper in the “ *Kilkenny Archæological Journal* ” for 1852–3, in which a statement of Montfaucon is given, which asserts that it was customary to deposit balls of rock crystal in sepulchres and urns in early ages. Thus twenty-four were found in Rome contained in an Alabaster urn, and one was discovered in 1653 at Tournai, in the tomb of a Frankish king, considered to be that of Childeric, who died A.D. 480.

Rock crystal spheres are constantly made at present in China, for there they constitute the appropriate badge on the cap of certain officials. There are eight different grades who wear distinctive coloured balls on their caps, in addition to other marks of dignity; and the fifth grade is specially distinguished by possessing a *ball of rock crystal*. This is, so far as I can learn, about the size of a large marble, and perforated. Now it is obvious there must be a large manufacture of such balls in constant operation; and the patient industry of a Chinaman would be quite adequate to produce perfect spheres of much larger size than marbles if required. The unchanging character of manufactures in China would explain the production of identically similar crystal balls in the time of the Romans, and during the revival of commerce with the far East, at the period of the Crusades, and its continuance up to our own times. The mineralogical evidence also strengthens this view, for the special character of the quartz admits of our ascribing to it a Chinese origin. From the 12th to the 16th century works of high art were carved from masses of crystal in Italy, Germany, and France; but, so far as I can ascertain, not spheres. Wondrous also as are the engravings of Assyrian, Babylonian, and Egyptian origin in hæmatite, agate, and even hard basalt, yet we do not obtain crystal spheres in association with undoubted works of those races. Their history rather points in the direction of the far East. They are objects of luxury to the Roman lady; they are brought to decorate the shrines and reliquaries of our primitive Irish churches—the Eastern relations of which are undoubted; they are the prized possession of knights returning from the Crusades to our western lands; they are valued as rare and priceless objects fit for royal regalia; and buried in the tomb of ancient king and priestess. Nor are the magical and curative powers ascribed to them less important as evidence of their foreign nationality: they were mysterious in their origin; far beyond the skill of the native lapidary; and valued as priceless gems alike by chieftain and clansman—conferring good fortune on their owners; distributing the priceless gift of health to men and cattle; nor did their simple-minded possessors question for a moment that with their aid they could foretell futurity itself.

Additional information about talismans used for the cure of diseases of men and cattle in Ireland will be found in vol. v., N.S., “ *Kil-*

kenny Archæological Journal," 1867, which contains a Paper on "Irish Medical Superstition," by the late John Windele, Esq. (see pp. 306-326).

Also in the same Journal, 4th series, vol. iii., where Mr. G. M. Atkinson describes and figures the Imokilly amulet, composed of dark-grey banded agate, streaked with white lines and perforated. The sphere measures,  $1\frac{1}{4}$  inches in diameter, and weighs 5 oz.: in 1875, it was in the possession of Maurice Fitzgerald, Esq., Manager, Munster Bank, Middleton, the representative of the Seneschals of Imokilly. In the same Paper another hard brown stone amulet, termed a murrain stone, is alluded to as being used at Ballyvourney, county Cork, which is a sphere of about  $5\frac{1}{2}$  inches in diameter. To this tradition "ascribes many virtues, and its performances in the hands of Saint Gobinet were incredible." Still another medical stone is stated to have been owned by Mrs. Noonan, of Liscarroll, and after her death was in the possession of her daughter, Mrs. Goold. It is about the size of a large marble, and composed of shining crystal; probably it consists of translucent quartz, though its exact composition is not stated in the Journal.



XLVII.—ANCIENT CROSS-BOW OR “LATCH,” OBTAINED IN DUBLIN DURING THE EXCAVATIONS IN THE PLUNKET-STREET AREA, IN 1883. By WILLIAM FRAZER, F. R. C. S. I., M. R. I. A.

[Read, June 9, 1884.]

THIS interesting specimen of a weapon that has long fallen into disuse in active warfare came into my possession through the medium of persons who had bought it from its original discoverer. Soon after it was unearthed, I endeavoured to ascertain the circumstances under which it was procured; but it was possible to rely with certainty only on the following points, which I have reasonable ground for believing are correct:—

About a year since, extensive clearances were being made in our city in what is known as the Plunket-street Area: when removing the old dilapidated houses portions of the ancient walls were laid bare, constructed of firm stone masonry. These outlying fortifications of the city had on one side of them probably, in former times, a wide fosse or ditch, such as was usual in similar situations; but all trace had disappeared of such a ditch, and it was filled with soil. Now, I believe that it was in excavating somewhere on the site of this old ditch that the cross-bow was procured; but when or whereabouts, or at what exact depth from the surface it was obtained, I am unable to say. It must have fallen into my possession within a few days of its discovery, for the woodwork of the shaft was sodden with moisture and soft from having lain so many years in damp clay, and it required careful drying for its preservation. Subsequently I saturated the woodwork with the best preservative I know of, pure paraffine, which not only keeps the wood from decay, but preserves it from the ravages of worms, a fertile source of anxiety to collectors like myself. Another conclusive evidence of its recent removal from the ground was, that mud still filled up different portions of its sunk ornamentation; and I regret to say that inserted pieces, probably of silver work, were missing, which I found it impossible to recover. This was the more annoying, as their value was trifling, and they could not have been long taken away—possibly by the finder; however, enough traces of decoration remained to show that the shaft was originally ornamented with inserted twists of silver wire, and small portions of bone, inlaid in little circles, forming patterns sunk into the wooden stock.

This ornamental and neatly-made weapon is of such light and elegant form that we can without difficulty believe it was intended for the use of a lady or noble, and such as would be better adapted for hunting purposes than as a weapon of warfare; in fact it appears to be such a cross-bow as in the days of Queen Elizabeth would be termed a “Prodd” or “Latch,” and of which several examples, still more elaborate in their decorations than this specimen, are preserved in collections of ancient arms and armour. The formidable arbalest of older construction required the use of a winding apparatus to set the bow a *cranequin*, or *moulinot*, but this was utilized by means of a le-

verage arrangement of which sufficient remains are left to explain its action. We cannot be far astray in attributing its age to about the time of Elizabeth; or possibly somewhat later—say early in the reign of James I. The appellation "Latch" applied to cross-bows of lighter and more portable construction, worked by a form of lever instead of the old-fashioned hand windlass, dates back at least to the year 1547, Edward VI.'s reign, and was possibly applied, owing to the manner in which the string was caught, and again discharged, in propelling the bolt or arrow.

There are a few matters of historic interest connected with the use of the cross-bow worth bearing in recollection. At one period it was considered to be a weapon of such malignant and formidable character that it deserved to occupy a position altogether outside the pale of civilized legitimate warfare; in fact, it ranked much in the same way as explosive bullets or the employment of dynamite would be viewed in modern battle-fields. Thus the arbalast was altogether prohibited from being made use of by the 29th Canon of the Second Council of Lateran, A.D. 1139; this was during the reign of our King Stephen of England, and of Louis le Jeune of France. The words of the Canon are, "*Artem illam mortiferam et Deo odibilem Ballastarium et sagittarium adversus Christianos et Catholicos exerceri di castero sub anathemate prohibemus.*"

It was too useful a weapon, however, to be given up until replaced by more formidable and dangerous means of destruction; and Richard of England, who was in some degree instrumental in its employment, having lost his life from a cross-bow bolt, when warring in France, was considered to afford a good moral lesson of the danger of trifling with such prohibitions, and of the vengeance that must follow similar offenders against such important laws.

Some centuries later, Henry VII. tried the effects of statute law in prohibiting the use of the cross-bow, at least by the commonalty. It was ordained by Parliament that "No man shall shoot with the cross-bow without the King's license, except he be a lord, or have two hundred marks in land."

It would be rather difficult to say at what time cross-bows ceased to be employed. Planché, in his valuable *Cyclopædia of Costume*, figures a "Prodd," or hunting cross-bow, which he refers to so late a period as that of William III. This instrument was made with a stock similar to that of an ordinary gun or carbine, for steadying against the owner's shoulder in taking aim at game; but there is no question that in a modified form cross-bows were in use until a very recent date; in fact, as a boy, I made and owned a rather efficient cross-bow, capable of killing small birds and breaking windows. These bows were usually fashioned like the "Prodd" of the time of William III., with a stock like that of a gun, and had a trigger for discharging the bolt or arrow: the bow itself was made from a strong piece of lancewood, and the string most preferred was catgut. Of late years such weapons appear to have vanished altogether, even from the recollection of school-boys.

**XLVIII.—DESCRIPTION OF A LARGE SILVER PLAQUE, COMMEMORATIVE OF MARTIN LUTHER AT WITTENBERG, A. D. 1517. By WILLIAM FRAZER, F. R. C. S. I., M. R. I. A.**

[Read, June 9, 1884.]

A SLIGHT acquaintance with the subject will serve to explain the special interest taken by persons who devote their attention to numismatic and medalllic pursuits, in that earlier class of medals and plaques cast or struck during the fifteenth and sixteenth centuries. Such medals are of importance to the historian, for they record events considered of sufficient value by their fabricators to be transmitted in an indestructible form to succeeding ages; and they are likewise, as a rule, works of decided artistic excellence, the outcome of a period and of men whose achievements in every department, whether literature, art, or statecraft, were remodeling ancient modes of thought, and laying the foundations of all our subsequent advance in human knowledge. When portraits are represented, they preserve reliable likenesses of distinguished individuals, of many of whom no other record equally faithful is obtainable; and whenever the artist has designed a picture of the passing events of his time, or has developed some imaginary, perhaps complimentary, mythologic scene, still the grace and boldness of his design and the successful mode of its execution impart to these small pictures in metal features as well deserving of careful study and appreciation as the larger and better known efforts of the painter upon his broad canvas. Nor will the collector value them less because they have to be diligently sought for: like rare gems, they hold their price; and of late years so rapidly has the price increased that their acquisition can only be hoped for at considerable pecuniary cost.

Of these early medals, the special class relating to Luther and the times of the Reformation are few in number, and proportionally esteemed. To make this fact intelligible we must bear in mind that "the art of medal engraving had only reached Germany a few years before Luther began to make his name known as a Reformer. It was still a very costly process, and confined altogether to the service of the great. This accounts for the fact that we have only four contemporary medals of Luther and other actors in the Reformation, excepting those of a more exalted rank, such as Pope Leo X., the Emperor Charles V., Henry VIII. of England, and the Electors of Saxony." So writes Mr. C. F. Keary in his introductory observations upon the series of medals which were exhibited in connexion with the Luther Exhibition in 1883, held in the Grenville Library, at the British Museum.

These few remarks will serve to explain the reasons why I am desirous of recording the existence of a large-sized medalllic plaque commemorative of Luther and the commencement of the Reformation, which appears to be possibly contemporaneous with the event it re-

presents, or at least made shortly after it. Furthermore, so far as I can ascertain, the plaque is altogether unique, for it is undescribed in those works where it would have been figured and recorded if known.

I purchased this medallion some time since. It is impossible to ascertain its previous history, or who were its former possessors. It is a casting made in silver, apparently from an original design executed with much spirit, and displaying decided artistic ability. The plaque is of large size, measuring four inches in diameter, and having a silver ring for suspension. The casting has been worked over by chasing or impressing tools, with delicate care, covering much of the surface with linear successions of minute raised points. The centre of the medal represents in the back ground a church-door and surrounding walls; outside is a group of people skilfully disposed, and dressed in the costume of the time; two of these, standing in the foreground to the left of the field, with unbonneted heads, are addressed by Luther, whose right arm is extended, whilst the left arm is bent to his side and supports a Bible or book; he is dressed in full academic robes, and although the entire figure is less than 2 inches in height, it is easy to recognize in it a good portrait representation of the Reformer; indeed the face is a fair characteristic likeness of his features such as we see them in engravings, &c. The broad border surrounding the centre medallion bears the inscription "Mit Gott begonnen," in German letters, and beneath are the words "Zu Wittenberg den 31 October, 1517;" a date which corresponds to his famous denunciation of Indulgences and the publication of his Thesis, which he caused to be affixed to the door of the Castle church at Wittenberg. A copy of the Indulgence was exhibited recently in London, and there is a photograph of it in the British Museum Handbook of the Luther Exhibition.

**XLIX.—ON THE IDENTIFICATION OF THE ANIMALS AND PLANTS OF INDIA WHICH WERE KNOWN TO EARLY GREEK AUTHORS. By V. BALL, M.A., F.R.S., Director, Science and Art Museum, Dublin.**

[Read, June 9, 1884.]

IN a communication made by me last year to the Royal Geological Society of Ireland, entitled "A Geologist's Contribution to the History of India," I endeavoured to identify many mineral productions which are mentioned by the writers of antiquity. Partly by the recorded characteristics of these minerals, partly by such indications as are given of the localities whence they were derived, I was enabled, by a comparison with our present knowledge of the mode of occurrence and distribution of minerals in India, to arrive at a number of conclusions, the main tendency of which has been to show that many apparently extravagant and fictitious stories by these early writers rest on substantial bases of facts.

While engaged upon that inquiry with reference to minerals, I came upon numerous allusions to animals and plants, for some of which, in spite of their apparently mythical character, I felt sure that equally substantial foundations could be found by subjecting them to the same sort of analytical comparisons with known facts. From time to time, as leisure has been found for the purpose, I have carried on this investigation, and have occasionally published some of the results.<sup>1</sup>

Inquiries like these belong, if I may use the expression, to a border land where the student of books and the student of nature may meet and afford one another mutual assistance.

I possess no special philological qualifications for this kind of work, and have only a slight acquaintance with a few of the languages of India; but, on the other hand, I think I may lay claim to the possession of some special knowledge of the animals and plants of India, the ideas about them which are current among the natives, and the uses they put them to. During my travels in the wildest regions of India I have ever taken an interest in the customs and beliefs of the so-called aboriginal tribes, and have had many opportunities for tracing out stories believed by them, and also sometimes by Europeans, to the sources from whence they had originated. This kind of experience enables me now to take up the tale of explanation where it has often been left by linguists and historians, and carry it forward to a satisfactory conclusion.

A want of personal acquaintance with India, or when that was possessed, a want of such information as can only be acquired by a

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<sup>1</sup> *The Academy*, April 21, 1883, and April 19, 1884.

field naturalist, using the title in its widest sense, has caused many commentators, both among the early Greeks and Romans and the Continental and English *literati* of the present day, when at a loss to explain the so-called myths, to turn upon their authors and accuse them roundly of mendacity. Thus Strabo states succinctly that, "Generally speaking, the men who have hitherto written on the affairs of India were a set of liars." Again, Lassen has spoken of Ktesias, when referring to a particular statement of his, in much the same way, although I shall be able to demonstrate that the condemnation was in that particular case wholly undeserved.

The Eumeristic treatment of myths, according to which all that is possible may be accepted as historical, while the remainder is to be rejected as fiction, is all very well, provided that the person who conducts the analysis has become competent to do so by the nature and extent of his experience.

Elsewhere<sup>1</sup> I have recorded numerous reported cases of children having been found living in wolves' dens in India; and these, to say the least, cannot be fairly disposed of in the off-hand manner that the follower of the Eumeristic doctrine would apply to the story of Romulus and Remus, and many others like it.

The well-known Arabian story, related by the author of Sinbad the Sailor, Marco Polo, and Nicolo Conti, of the method of obtaining diamonds by hurling pieces of meat into a valley, had its origin, as I believe, in an Indian custom of sacrificing cattle on the occasion of opening up new mines, and leaving portions of the meat as an offering to the guardian deities, these naturally being speedily carried off by birds of prey. This custom is not yet extinct.

The so-called myth of the gold-digging ants was not cleared up till, by chance, information was received<sup>2</sup> as to the customs and habits of the Thibetan gold miners of the present day. Then Sir H. Rawlinson, and, independently, Dr. Schiern, of Copenhagen, were enabled to come forward and state beyond a question of doubt that the *myrmeces* of Herodotus and Megasthenes were Thibetan miners, and, it may be added, their dogs. The same dogs are now for the first time identified, as will be seen further on, with the *griffins*. The full account of this discovery by the above-named authors would find its proper place in a Paper on races of men, so that I pass from it now, save that I mention a contribution which I have made to it, namely, that the horn of the gold-digging ant, which we are told by Pliny was preserved in the temple of Hercules at Erythræ, and which for centuries has been the subject of much speculation, was probably merely one of the gold-miners' pickaxes. I have been informed by an eyewitness, Mr. R. Lydekker, that the picks in use by agriculturists and miners in Ladak consist of horns of wild sheep mounted on handles.

<sup>1</sup> *Jungle Life in India*, and *Journal of the Anthropological Institute*, 1880.

<sup>2</sup> From the Reports of the Pundits employed in Trans-Himalayan Exploration by the Indian Government.

I believe it probable that Dr. Schiern would be willing to accept this in preference to his own suggestion, namely, that the horns were taken from the skins which are worn as garments by the Thibetans. Perhaps it is as well to add here further, for the benefit of those who may not be aware of the origin of the connexion between ants and gold, that independently that part of the myth was cleared up some years ago, first by Dr. Wilson,<sup>4</sup> who pointed out that the Sanskrit name for the small fragments of alluvial gold (gold dust) was *paippilaka*, meaning "ant-gold," in reference to the size and form; but the characteristics of the "ants" were always supposed, up to the year 1867, to have been wholly imaginative. Then, however, it was found, as related above, that these characteristics were in the most minute particulars identical with those of Thibetan miners. The whole is an example of what has occurred in reference to other subjects also, namely, the too literal acceptance by the Greeks of the signification of Oriental words, the merely symbolical meaning not having been understood as such. This is, for instance, notably the case with reference to the "Indian Reed": cf. p. 336.

It may be here noted that in the foot-notes to various editions of Ktesias, Megasthenes, Herodotus, Ælian, and Strabo, *i. e.* the authors who furnish the principal part of the statements with which this Paper deals, commentators have not unfrequently suggested alterations in the accepted text to suit their preconceived notions of what is possible. With regard to several cases of this kind, I believe the explanations offered in the following pages will show that the text would lose the meanings intended were such changes adopted. Again, there are cases where commentators have suggested derivations for Greek words from Sanskrit or Persian names, which will, I think, be shown to be incorrect.

Many of the identifications of animals and plants suggested by commentators exhibit a sublime indifference on their part to the laws which govern and the facts observed with reference to the geographical distribution of animals. Such looseness is akin to the custom common enough among Englishmen in India of talking about animals by names strictly applicable to species not found in the Oriental Region. Thus you will hear, at the present day, sportsmen speaking of panthers, bison, elk, armadillos, alligators, toucans, canvas-back-ducks, and humming-birds as being commonly shot by them in India, though as a matter of fact none of the animals to which these names are correctly applicable are ever found beyond the limits of the American Continent.

As an example of how statements about animals sometimes require strict investigation, I remember on one occasion an Englishman assuring me *very positively* that sulphur-crested cockatoos were to be found in large numbers in a particular jungle in the Central Provinces of India. On my pointing out the impossibility of such being the case,

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<sup>4</sup> Asiatic Researches.

the only evidence he could bring in support of the statement that this essentially Australian bird was to be found so far from its proper limits, was that the Rajah of the district told him so when he had been shown a domesticated specimen. To which I could only reply that a boastful spirit as to the resources of his own territory must have led the Rajah to be guilty of what was a downright falsehood.

I have still another charge to make against the commentators. Up to the very last edition of one of our Greek authors, which was published in the present year, a custom has been in practice of passing very stale comments from one to another, without reference being made to more recent and direct sources of information.

And here I would mention the names of two encyclopædists for whose works I have the greatest respect and admiration: they are Lassen and Ritter, to the researches by both of whom commentators are much beholden. But as may readily be conceived, during the last fifty years there has been a great advance in our scientific and accurate knowledge of the animals and plants of India, nevertheless we find modern editors making use of statements proximately derived from Lassen, but which are often ultimately traceable to that most industrious compiler, Karl Ritter, who wrote nearly fifty years ago. Were he alive he would probably have kept better abreast with modern research than have so many who now use the *data* which he collected from still earlier writers. Surely such a statement as that there is at present a tribe of Khonds in the Dekkan, who eat the bodies of their deceased relatives, is one that ought not to appear, as it does in a recent edition, except it can be substantiated.<sup>5</sup> It may be true; but, I must confess, that without modern and undoubted proof of the fact, I am unwilling to believe it.

The original texts of Megasthenes and Ktesias not having been preserved to us, except as fragments which have been incorporated by other authors, we cannot say with certainty what they may or may not have contained; but it is sufficiently apparent that it is precisely the most marvellous and apparently impossible descriptions which have been preserved, sometimes out of mere curiosity, and sometimes for purposes of condemnation; the plain matter-of-fact stories about men, animals, and plants, if they ever existed, have been irretrievably lost.

Though not unaware that I run the risk of some adverse criticism when entering into an arena of controversy like this, I have already received a considerable amount of encouragement from quarters where such work is duly appreciated; but the highest incentive I have had in the elucidation of these myths, apart at least from the interest of the study itself, is, that as a former Indian traveller myself, I derive a sincere pleasure in so far establishing the veracity and relieving the characters of travellers from the aspersions which during twenty centuries, more or less, have been freely cast upon them.

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<sup>5</sup> Cf. Herodotus, by Prof. Sayce.



I take for my text and for my justification, if need there be, the following passage from De Gubernatis, who, although the author of a zoological mythology, lays no claim to being a zoologist himself. He says: "And if I have sought to compare several physiological laws with the myths, it is not because I attribute to the myth a wisdom greater than that which it contains in reality, but only to indicate that, much better than metaphysics, the science of Nature, with the criteria of positive philosophy can help us to study the original production of myths and their successive development in tradition."

It will be observed in the pages which follow that, besides the simple identifications, there are what may conveniently be called compound identifications of two classes. In the first, two or more animals, as described by the compilers, are shown to owe their origin to accounts by different authors of the same animals or plants, the identity of which was not perceived by compilers like *Ælian* (*cf.* p. 316). In the other class, under one name, characteristics belonging to more than one species are included (*cf.* p. 331). Both these, but especially the latter, have increased the difficulties of identification.\*

But a few words remain to be said as to the arrangement of the facts contained in the following pages. Originally it was my intention to make use of some of them as illustrations of a Paper on the origin of myths; but, as they multiplied, it seemed to me that they would have an additional value if they were so arranged that they could be easy of reference; and, in order to complete the list, I have included many identifications which have been made by others. This is more particularly the case with the plants yielding drugs: these have for a long time attracted the notice of botanists and other experts; but their determinations have not in all instances been incorporated into the footnotes of commentators.

There still remain a few accounts of animals and plants which have yet to be grappled with; some of these I hope to be able to discuss hereafter, and it may be that I shall see my way to account for some of the so-called mythical tribes of men described by the early Greeks. Some of them, however, appear to be quite beyond the reach of explanation, but others may possibly be identified with particular tribes of what are commonly, but not always correctly, called the aboriginal inhabitants of India.

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\* Pliny's accounts of minerals furnish a striking example of both: on the one hand, under half a dozen different names, culled from different authors, he has described the same mineral over and over again without recognizing the identity. In several cases, notably in that of the *Adamas*, he describes several distinct minerals under one title.

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<sup>7</sup> This animal is included here because it has been mistaken by some commentators for the Indian jackal. It belongs, as correctly stated by Ktesias, to the African fauna.

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## MAMMALS.

## 1. MONKEY (Πιθήκος).

*Inuus rhesus*, Des. (?)—The Bengal Monkey, or *Macacus radiatus*, Kuhl.  
The Madras Monkey.

According to Strabo,<sup>10</sup> Megasthenes says, “There are monkeys, rollers of rocks, which climb precipices, whence they roll down stones upon their pursuers.” I am not prepared to deny that this story may have originated in the title of monkey which, as is well known, was freely bestowed upon the wild tribes of men who inhabited the jungles of India, and who, when attacked, often had recourse to this mode of defence against their better armed assailants. But that it is not impossible that the story may have referred to real monkeys will be apparent from the following personal experience of my own:—“When at Malwa Tal, a lake near Naini Tal, in the Himalayas, I was warned that in passing under a landslip, which slopes down to the lake, I should be liable to have stones thrown at me by monkeys. Regarding this as being possibly a traveller’s tale, I made a particular point of going to the spot in order to see what could have given rise to it. As I approached the base of the landslip, near the road on the north side of the lake, I saw a number of brown monkeys (*Inuus rhesus*) rush to the sides and

<sup>8</sup> Vide No. 18.<sup>9</sup> Vide No. 8.<sup>10</sup> Geographica, xv. 1, 56. Cf. Megasthenes, by J. W. M’Crindle, p. 58.

across the top of the landslip, and presently pieces of loosened stone and shale came tumbling down near where I stood. I fully satisfied myself that this was not merely accidental, for I distinctly saw one monkey industriously, with both fore paws, and with obvious *malice prepense*, pushing the loose shingle off a shoulder of rock. I then tried the effect of throwing stones at them, and this made them quite angry, and the number of fragments which they set rolling was speedily doubled. This, though it does not actually amount to throwing or projecting an object by monkeys, comes very near to the same thing, and makes me think that there may be truth in the stories of their throwing fruit at people from trees,"<sup>11</sup> or at least dropping them on their heads.

## 2. LONG-TAILED MONKEY (*κερκοπίθηκος*).

*Presbytis priamus*, Elliot.—The Madras Langur.

There can be little doubt that another species of monkey, described by Megasthenes, as recorded by Strabo and Ælian, belonged to the genus *Presbytis*, and it may, I think, be identified with the Madras species *priamus* rather than with the Bengal species *entellus*. "The monkeys of India," writes Strabo,<sup>12</sup> "are larger than the largest dogs. They are white except in the face, which is black, though the contrary is observed elsewhere. Their tails are more than two cubits in length; they are very tame, and not of a malicious disposition, so that they neither attack nor steal." An account by Ælian<sup>13</sup> is more detailed. "Among the Prasii (Sansk., *Prachyas*, i. e. Easterns) in India there are found, they say, apes of human-like intelligence, which are to appearance about the size of Hyrcanian dogs. Nature has furnished them with forelocks, which one ignorant of the reality would take to be artificial. Their chin, like that of a satyr, turns upward, and their tails are like the potent one of the lion. Their bodies are white all over, except the face and the tip of the tail, which are of a reddish hue. They are very intelligent and naturally tame. They are bred in the woods, where also they live, subsisting on the fruits which they find growing wild on the hills. They resort in great numbers to Latage, an Indian city, where they eat rice, which has been laid down for them by the King's orders. In fact, every day a ready-prepared meal is set out for their use. It is said that when they have satisfied their appetite they retire in an orderly manner to their haunts in the woods without injuring a single thing that comes in their way." Ælian gives another account also, which differs in some respects from the above; but on the whole, considering the region to which the account of

<sup>11</sup> *Jungle Life in India*, p. 537.

<sup>12</sup> *Geographica*, xv. 1, 37.

<sup>13</sup> *Hist. Anim.*, xvi. 10. Cf. Megasthenes, by J. W. McCrindle, p. 57.

Megasthenes referred, I think that the species was the above, the technical description of which, given by Jerdon,<sup>14</sup> is as follows:—“Ashy grey colour, with a pale reddish or *chocolat au lait* overlying the whole back and head; sides of the head, chin, throat, and beneath, pale yellowish; hands and feet, whitish; face, palms, and fingers, and soles of the feet and toes, black; a high compressed vertical crest of hairs on the top of the head; hairs long and straight, not wavy; tail, of the colour of the darker portion of the back, ending in a whitish tuft; much the same size as *entellus*, i. e.—length to root of tail, 30 inches; tail, 43 inches; but it attains a still larger size. Inhabits eastern ghâts and southern portion of table-land of Southern India, also in Ceylon, but not extending to Malabar coast.”

Setting out rice for the use of monkeys, as described by Ælian, is a common custom at present.

### 3. THE FLYING SERPENT (Ὀφίς πτερωτός).

*Pteropus edwardsi*, Geoff.—The Flying Fox.

Strabo,<sup>15</sup> quoting from Megasthenes, tells us that there are “in some parts of the country serpents two cubits long, which have membranous wings like bats. They fly about by night, when they let fall drops of urine or sweat, which blister the skin of persons not on their guard, with putrid sores.” Ælian<sup>16</sup> gives a similar account. There can be little doubt that this is an exaggerated account of the great fruit-eating bats of India, which are known to Europeans as flying foxes. The extent of their wings, according to Jerdon, sometimes amounts to 52 inches, and in length they reach 14½ inches. Though noisome animals in many respects, their droppings have not the properties above attributed. Flying foxes are eaten by some of the lower classes of natives, and Europeans who have made the experiment say the flesh is delicate and without unpleasant flavour. As to the winged scorpions which, according to Megasthenes, sting both natives and Europeans alike, I can only suggest that they were hornets of large size.

### 4. THE MARTIKHORA (Μαρτιχώρας, Ἀνδροφάγος).

*Felis tigris*, Linn.—The Tiger.

This animal was described by Ktesias as being of the size of the lion, red in colour, with human-like face, ears and eyes, three rows of teeth, and stings on various parts of the body, but especially on the tail, which caused it to be compared with the scorpion. Its

<sup>14</sup> Mammals of India, p. 7.

<sup>15</sup> Geographica, xv. 1, 37. Cf. J. W. M'Crimdell's Megasthenes, p. 56.

<sup>16</sup> Hist. Anim., xvi. 41.

name records the fact that it was a man-eater (Persian *Mard-khor* in its archaic form), and this characteristic is also expressly stated by Ktesias. It was hunted by the natives, from the backs of elephants. Although it has been suggested by some commentators that it was the tiger, none of them appear to have seen how the several statements can be shown to be founded on actual facts. Pausanias, for instance, attributes these details to the imagination of the Indians, excited by dread of the animal. Others appear to be unwilling to regard the animal as being capable of identification. Thus Lassen, referring to Ktesias's assertion, that he had seen one of these animals with the Persian monarch, to whom it had been presented by the Indian king, asserts that "he cannot, in this instance, be acquitted of mendacity."<sup>17</sup>

Among facts not generally known, though mentioned in some works on Zoology, is one which I can state from my own personal knowledge is familiar to Indian Shikaris—it is that at the extremity of the tail of the tiger, as well as of other *felidae*, there is a little horny dermal structure like a claw or nail, which, I doubt not, the natives regard as analogous to the sting of the scorpion. Moreover, the whiskers of the tiger are by many natives regarded as capable of causing injury; and sportsmen know, where this is the case, that the skins of their slaughtered tigers are liable to be injured by the plucking out or burning off the whiskers—to avert accidents. The idea of the three rows of teeth probably had its origin in the three lobes of the carnivorous molar, which is of such a different type from the molars of ruminants and horses. The Martikhora was, therefore, I believe, the tiger, and the account of it embodies actual facts, though they were somewhat distorted in the telling.

It may be said that it would not be difficult to present an account of the tiger derived from the attributes and characteristics ascribed to the animal at the present day by the natives, which would have a far less substantial basis of fact than has the one given to us by Ktesias.

Aristotle gives an account of this animal, which account, he states, was taken from Ktesias.<sup>18</sup>

Megasthenes, according to Strabo, states with reference to tigers, that the largest are found among the Prasii (Sansk., *Prachyas*, i. e. Easterns), being nearly twice the size of the lion, and so strong that a tame tiger, led by four men, having seized a mule by one of the hind legs, overpowered it and dragged it to him.<sup>19</sup> Not a very remarkable performance, the Indian sportsman will remark, who knows what a tiger can do in the way of dragging heavy oxen for long distances over obstacles.

<sup>17</sup> Ancient India, by J. W. M'Crindle, p. 77.

<sup>18</sup> De Hist. Anim., ii. 1. *Vide postea*, p. 346.

<sup>19</sup> Geographica, xv. i. 37. Cf. Megasthenes, by J. W. M'Crindle, p. 166.

## 5. THE ΚΡΟΚΟΤΤΑΣ, or ΚΥΝΟΛΥΚΟΣ (Κροκόττας, Κυνόλυκος).

*Hyæna crocuta*.—The Spotted Hyæna.

Ktesias, according to Photios,<sup>20</sup> describes the above animal as follows:—"There is in Ethiopia an animal called properly the Krokottas, but vulgarly the Kynolykos. It is of prodigious strength, and is said to imitate the human voice, and by night to call out men by their names, and when they come to fall upon them and devour them. This animal has the courage of the lion, the speed of the horse, and the strength of the bull, and cannot be successfully encountered with weapons of steel."

This I am disposed to identify (as from the references given by him in a foot-note, so also does Mr. M'Crimble) with the spotted hyæna (*H. crocuta*) of Africa—a very powerful animal—which, like its Indian relative (*H. striata*), has a hideous cry at night. It is, I believe, not conspicuous for courage; but according to some accounts the lion is less courageous in reality than is generally supposed. That however is a small matter. I cannot but think that Lassen<sup>21</sup> is wrong in identifying, on philological grounds, this animal with the jackal, the Sanscrit name for the latter being *Kottharaka* from *Kroshtuka*. This involves his saying, first, that the above were "fabulous attributes given to the jackal, an animal which frequently appears in Indian fables;" and, second, that the Ethiopia of Ktesias meant India. Cf. Appendix, p. 346.

## 6. THE GRYPHON, or GRIFFIN (Γρύψ).

*Canis domesticus*, var. *Tibetanus*.—Thibetan Mastiffs.

According to Ktesias, as related by Photios,<sup>22</sup> gold was obtained in certain "high towering mountains which are inhabited by the griffins, a race of four-footed birds, about as large as wolves, having legs and claws like those of the lion, and covered all over the body with black feathers, except only on the breast, where they are red. On account of these birds the gold, with which the mountains abound, is difficult to be got." Ælian's account of the same animals adds some probably spurious particulars—such as that the wings are white, the neck variegated with blue feathers, the beak like an eagle's, and that, according to the Baktrians, they built their nests of the gold which they dug out of the soil, but that the Indians deny this. He states that the auriferous region which the griffins inhabited was a frightful desert.

<sup>20</sup> Ecloga in Photii, Bibl. lxxii. Cf. Ancient India, by J. W. M'Crimble, pp. 32, 33.

<sup>21</sup> Ancient India, p. 76.

<sup>22</sup> Ecloga in Photii, Bibl. lxxii.

Taking Photios's account alone, and excluding from it the word birds, and for feathers reading hair, we have a tolerably accurate description of the hairy black-and-tan-coloured Thibetan mastiffs, which are now, as they were doubtless formerly, the custodians of the dwellings of Thibetans, those of gold miners as well as of others. They attracted the special attention of Marco Polo, as well as of many other travellers in Thibet; and for a recent account of them reference may be made to Capt. Gill's "River of Golden Sand."

They are excessively savage, and attack strangers fiercely, as I have myself experienced on the borders of Sikkim.

This identification serves also to clear up certain of the details in the story of Megasthenes and Herodotus, as to the gold-digging ants, which have been identified by Sir H. Rawlinson and Professor Schiærn, as mentioned in the introductory remarks on p. 303, with Thibetan gold miners and their dogs. The former, on account of the great cold, are and were clad in furs, and it would appear, shared with the dogs in giving characteristics to the famous ants which were for so long regarded as a myth incapable of explanation. The "ants" which, according to Herodotus, were taken to Persia, and kept there, were, I believe, simply these mastiffs. He tells us<sup>23</sup> elsewhere that Tritantachmes, Satrap of Babylon, under the Achæmenians, "kept a great number of Indian dogs. Four large towns situated in the plain were charged with their support, and were exempted from all other tribute."

Larcher, in his history of Herodotus, quotes the following, without however noticing how far it aids in clearing the myth of the griffins:—"M. de Thon, an author worthy of credit, recounts that Shah Thamas, Sophie of Persia, sent to Suliman one of these ants in 1559. 'Nuntius etiam a Thamo oratoris titulus quidam ad Solimanum venit cum muneribus, inter quæ erat *formica indica*, canis mediocris magnitudine, animal mordax et sævum. Thuanus—Lib. xxiii.'"

Regarding the name griffin or gryphon, the Persian *giriften* (to gripe, or seize) is suggested by Mr. M'Crimble as the source. Hindustani contains several words thence derived, as *giriftar*, a captive; *girift*, seizure, &c. The Thibetans call their dogs *gyake*, or royal dogs, on account of their size and ferocity.

It may be added here, in its proper place, though already mentioned in the introductory remarks, that a passage in Pliny's account of the ants,<sup>24</sup> which has been the source of much difficulty to many who have discussed this question, admits, as I have elsewhere shown, of a satisfactory explanation. The passage is:—"Indicæ formicæ cornua, Erythris in sæde Herculis fixa, miraculo fuere." The horn of the Indian ant was probably an example of the pickaxe even now in common use in Thibet. It is a sheep's horn fixed on a handle: this is, I think, more probable than that it was a horn taken from one of the skin garments worn by the Thibetan miners, as has been suggested by Professor Schiærn.<sup>25</sup>

<sup>23</sup> Clio, lib. i. cap. cxcii.

<sup>25</sup> Indian Antiquary, vol. iv. p. 231.

<sup>24</sup> Hist. Nat. lib. xi. cap. xxxi.  
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## 7. Dog (Κύων).

*Canis and Cuon* (?)—Domestic and Wild Dogs.

There are various allusions by our authors to other dogs besides those which have been identified as the originals of the griffins. Thus Ktesias, according to Photios,<sup>26</sup> says that "the dogs of India are of great size, so that they fight even with the lion." This may possibly refer to the well-known fact that packs of wild dogs (*Cuon rutilus*) prove a match for the larger carnivora. There are numerous well authenticated cases of tigers having being killed by these dogs.

Ælian<sup>27</sup> relates that "Ktesias, in his account of India, says that the people called the Kynamologoi rear many dogs as big as the Hyrkanian breed; and this Knidian writer tells us why they keep so many dogs, and this is the reason: from the time of the summer solstice on to mid-winter they are incessantly attacked by herds of wild oxen, coming like a swarm of bees or a flight of angry wasps, only that the oxen are more numerous by far. They are ferocious withal and proudly defiant, and butt most viciously with their horns. The Kynamologoi, unable to withstand them otherwise, let loose their dogs upon them, which are bred for this express purpose; and these dogs easily overpower the oxen, and worry them to death. During the season when they are left unmolested by the oxen, they employ their dogs in hunting other animals. They milk the bitches, and this is why they are called Kynamologoi (dog-milkers). They drink this milk just as we drink that of the sheep or goat."

There is at present a tribe in India who are noted for keeping a large breed of dogs, which are most efficient in the chase. These are the *Labanos* or *Brinjaras*, who, by means of their pack cattle, perform most of the inland carriage in the hilly central regions of the peninsula. I have met their caravans, and also their fixed habitations in the central provinces bordering western Bengal, where they are very numerous. This general region is the one where the Kynamologoi (or Kynokephaloi) may be presumed to have dwelt. In Orissa there is a Rajah of a petty state who keeps a very fine breed of dogs, by means of which deer are run down, especially, as I was told, during the rainy season, when the softness of the ground prevents them from running so fast as they are able to do at other times. There are similar breeds also in other parts of India.

The "oxen" referred to were probably wild buffaloes, which still do much injury to the crops in some parts of India, and are a cause of terror to the natives.

<sup>26</sup> Ecloga in Photii, Bibl. lxxii.

<sup>27</sup> De Animal Nat., xvi. 31. Cf. Anc. India, by J. W. M'Crimble, p. 36.

8. DOLPHIN (Δελφίς).

*Platanista indi.*, Blyth. *Delphinus* (Sp.?)

Ælian<sup>20</sup> tells us that the “dolphins of India are reported to be of two sorts: one fierce, and armed with sharp-pointed teeth, which gives endless trouble to the fishermen, and is of a remorselessly cruel disposition; while the other kind is naturally mild and tame, swims about in the friskiest way, and is quite like a fawning dog; it does not run!! (*sic* in trans.) away when anyone tries to stroke it, and it takes with pleasure any food it is offered.”

The first of these is probably the Indus species of the very curious genus of river porpoise (*Platanista*) which is found in India. The jaws are provided with numerous conical, recurved teeth. These porpoises are very destructive to fish, and are occasionally accidentally taken in nets. According to Jerdon,<sup>21</sup> they are speared by certain tribes of fishermen on the Ganges, who eat the flesh, and make oil from the blubber, which they use for burning.

The other dolphin mentioned by Ælian may, perhaps, be identified as a species of *Delphinus*, which often keeps company with vessels for long distances, though probably its tameness is somewhat exaggerated for the sake of contrast.

9. WHALE (Κῆτος).

*Balaenoptera indica*, Blyth.—The Indian Fin-whale.

Ælian<sup>20</sup> tells us that “whales are to be found in the Indian sea; they are five times larger than the largest elephant. A rib of this monstrous fish measures as much as twenty cubits, and its lip fifteen cubits.” Further on, he states that it is “not true that they come near the shore lying in wait for tunnies.”

The rib, twenty cubits long, was probably really the ramus of a jaw, and the length given is therefore not excessive, since one in the Calcutta Museum, according to Jerdon,<sup>21</sup> from an individual eighty-four feet long, measured twenty-one feet; and it is said that specimens measuring up to one hundred feet have been stranded on the Indian coast. Rami of the jaws of whales are even now not uncommonly mistaken for ribs.

Since the species of this genus of whales feed on fish, the statement which Ælian denies was probably to some extent founded on actual observation.

<sup>20</sup> Hist. Anim. xvi. 18.

<sup>30</sup> Hist. Anim., xvi 12.

<sup>20</sup> Mammals of India, p. 159. —→

<sup>31</sup> Mammals of India, p. 161.

## 10. THE ELEPHANT ('Ελέφας).

*Elephas indicus*, Cuv.—The Indian Elephant.

There are, as might be expected, numerous allusions to the Elephant by Megasthenes, Arrian, and the author of the Periplus. Its mode of capture is described, as also are its training, its uses in the chase and in war, its habits, and certain peculiarities of its constitution. Some of these latter, as, for instance, those connected with the coming together of the sexes, are correct, though a myth in reference to this last exists even at the present day, and is very commonly believed by many.

The elephants of Taprobane (i. e. Ceylon) are distinguished, according to Ælian's account—derived perhaps from Megasthenes—as being larger, and more intelligent, than those of the mainland. The same author, too, describes a white elephant, and relates in reference to it a story of its devotion to its master.

The author of the Periplus mentions several ports, both in Africa and India, whence *elephas* (i. e. ivory) was an article of export, as we know it had been since the days of Solomon.

A very fair monograph of the habits and external characteristics of the elephant might be written from the facts recorded by the above authors, supplemented by such as are given by Strabo and Pliny.

## 11. THE KARTAZONON AND THE INDIAN ASS (Καρτάζωνον, 'Ινδικὸς ὄνος).

*Rhinoceros indicus*, Cuv.—The Rhinoceros. *Genda*, Hin.

The *Kartazonon* of Megasthenes and the Horned Ass of Ktesias, although separately described by Ælian as if they were distinct animals, appear to be both capable of identification with the rhinoceros. This fact has been already more or less generally accepted by writers, although some particulars, especially those as to the colour, have given rise to much discussion and argument. It seems probable that the Rhinoceros was also the original of the *monokeros*, or unicorn, which, as we have good cause to know, is usually represented as an Horned Ass. Ælian's<sup>32</sup> description of the *Kartazonon* is as follows:—“It is also said that there exists in India a one-horned animal, called by the natives the *Kartazon*. It is of the size of a full-grown horse, and has a crest and yellow hair soft as wool. It is furnished with very good legs, and is very fleet. Its legs are jointless, and formed like those of the elephant; and it has a tail like a swine's. A horn sprouts out from between its eyebrows, and this is not straight, but

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<sup>32</sup> Hist. Anim., xvi. 20, 21.

curved into the most natural wreaths, and is of a black colour. This horn is said to be extremely sharp. The animal, as I learn, has a voice beyond all example—loud, ringing, and dissonant.”

Photios's<sup>33</sup> account of the “horned wild ass” of Ktesias agrees, in the main particulars, with one by Ælian.<sup>34</sup> That by the former is as follows : “Among the Indians there are wild asses as large as horses, some being even larger. Their head is of a dark-red colour, their eyes blue, and the rest of their body white. They have a horn on their forehead, a cubit in length (the filings of this horn, given in a potion, are an antidote to poisonous drugs). This horn, for about two palm-breadths upwards from the base, is of the purest white, where it tapers to a sharp point, of a flaming crimson, and in the middle is black. These horns are made into drinking-cups, and such as drink from them are attacked neither by convulsions nor by the sacred disease (epilepsy); nay, they are not even affected by poisons, if either before or after swallowing them they drink from these cups wine, water, or anything else. While other asses, moreover, whether wild or tame, and indeed all other solid-hoofed animals, have neither huckle bones (*astragulus*) nor gall in the liver, these one-horned asses have both. Their huckle bone is the most beautiful of all I have ever seen, and is in appearance and size like that of the ox. It is as heavy as lead, and of the colour of cinnabar, both on the surface and all throughout. It is an exceedingly fleet and strong animal, and no creature that pursues it, not even the horse, can overtake it,” &c.

Regarding the *astragulus*, or huckle-bone, the statement of its absence in solid-hoofed animals is incorrect, and I can offer no explanation of the reputed characteristics of that of the horned wild ass, except that an example seen by Ktesias had simply been dyed and weighted with lead. For short distances the rhinoceros can charge with great speed and force, and its voice is such as to merit to some extent the description by Megasthenes.

In reference to the colours of the animal, when I recall that I have often seen in India horses with tails and manes of a bright magenta, and with spots of the same colour all over their otherwise white bodies; that I have also seen elephants belonging to rajahs ornamented on their heads by the application of various pigments—I am led to conclude that the rhinoceros from which Ktesias's description was taken was a domesticated one which, in accordance with the natives' taste for bright colours, had been painted to take part in some pageant. Domesticated rhinoceroses are still kept by many natives; and they have, I believe, sometimes been trained like elephants to carry *howdahs*, with riders in them. I once met a native dealer in animals who had taken with him, for several hundred miles through the jungles, a rhinoceros, which he ultimately sold to the rajah of Jaipur, in

<sup>33</sup> Ecloga in Photii, Bibl. lxxii. 25: Cf. *Anc. India*, by J. W. McCrindle.

<sup>34</sup> Hist. Anim., iv. 52.

Madras. He drove the animal before him, he told me, "as if it were a cow."

The horn of the rhinoceros is still held in much esteem by the natives of India, both for making into cups and for the preparation of a drug. They will pay sportsmen a high price for these horns, but are particular about obtaining the right article, as I learned from a gentleman who, as a speculation, brought a number of rhinoceros horns from Africa, but failed to dispose of them in the Calcutta bazaar.

Having thus offered an explanation of what has hitherto been a difficulty to commentators, I should not be surprised if evidence should be forthcoming to prove that it has been the custom with the natives to adorn with coloured pigments the cuirass-like hides of tame rhinoceroses.

Since the above paragraph was written, I have obtained sufficient confirmation of the correctness of this view, for, on turning to Rousset's work on the Native Courts of India,<sup>25</sup> I find an account of a rhinoceros' fight at Baroda, which took place before the Gaikowar. The two animals were chained at opposite sides of the arena—one of them was *painted black, the other red*, in order that they might be distinguished, for otherwise they resembled each other in every point.

Ktesias' horned ass, therefore, had probably been whitewashed, and had had his horn painted blue and scarlet by his owner—who little foresaw what food for discussion and comment he was affording, by that simple act, to twenty centuries of philosophers and historians.

## 12. WILD HORSES AND ASSES (ἵπποι καὶ ὄνοι ἄγριοι).

*Equus onager*, Pallas.—Wild Ass of Cutch, &c.

According to Ælian<sup>26</sup> there are herds of wild horses and also of wild asses. "These interbreed, and the mules are of a reddish colour, and very fleet, but impatient of the yoke and very skittish. They say that they catch these mules with foot-traps, and then take them to the king of the Prasians, and that if they are caught when two years old they do not refuse to be broken in, but if caught when beyond that age they differ in no respect from sharp-toothed and carnivorous animals."

The mention of both horses and asses is no doubt due to the somewhat mule-like characters of the wild ass which is found in Western India, and is called *Ghor-khur* in Hindustani, and *Ghour* by the Persians. A closely allied species is the *Kiang* of Thibet. (*E. hemionus*, Pallas.) Even now by travellers they are sometimes spoken of as wild horses, but their neigh or bray, and tail, prove them to be true asses. In the Bikaner State, according to Dr. Jerdon, "once only in the year,

<sup>25</sup> L'Inde des Râjâhs.

<sup>26</sup> Hist. Anim., xvi. 9. Cf. Megasthenes, by J. W. M'Crindle, p. 163.

when the foals are young, a party of five or six native hunters, mounted on hardy Sind mares, chase down as many foals as they succeed in tiring, which lie down when utterly fatigued, and suffer themselves to be bound and carried off. In general they refuse sustenance at first, and about one-third only of those which are taken are reared; but these command high prices, and find a ready sale with the native princes. The profits are shared by the party, who do not attempt a second chase in the same year, lest they should scare the herd from the district, as these men regard the sale of a few *Ghor-khurs* annually as a regular source of subsistence."<sup>27</sup>

### 13. THE PIG (Υς).

*Sus indicus*, Schinz.—Indian Wild Boar.

Among statements by Ktesias which cannot be accepted, is the following, as related by Photios:<sup>28</sup>—"India does not, however, produce the pig, either the tame sort or the wild." Ælian in reproducing the same, adds that the "Indians so abhor the flesh of this animal that they would as soon taste human flesh as taste pork." Aristotle and Palladius also repeat the story of the absence of swine, which, if it had been true, would naturally suggest the inquiry how came the Indians to abhor the flesh, and, still more, how came the fact to be known? It is notorious that certain tracts of India at the present day do not contain wild pigs, and also that several large sections of the people detest the pig, and would not allow it to be kept in their villages. There are, however, some Hindus of high caste who will eat the flesh of the wild boar, and the Sind Emirs had pig preserves for purposes of sport. If other evidence were wanting that the pig is not a modern importation, and that the wild pig is not *feral*, appeal may be made to the fossil remains of pigs found in the Sivalik hills to show that it belongs to the ancestral fauna. Among some of the aboriginal and other tribes the keeping of pigs is, and probably always has been, a prevalent custom. Ancient Sanscrit writings would probably furnish evidence of the existence of pigs in India before the time of Ktesias.

### 14. SHEEP AND GOATS (Πρόβατα καὶ αἰγες.)

*Ovis et Capra.*

Both Photios<sup>29</sup> and Ælian state that the sheep and goats of India are bigger than asses. The former adds that they produce from four to six young at a time, and the latter that they never produce less than three, but generally four.

<sup>27</sup> Mammals of India, p. 237.

<sup>28</sup> Cf. J. W. M'Crimble's Ancient India, pp. 17, 46, 47.

<sup>29</sup> Ecloga in Photii, Bibl. lxxii. 13. Cf. Anc. India, by J. W. M'Crimble, p. 17.

All these statements are without foundation, for, although there are large breeds of goats peculiar to certain parts of India, they never approach the ass in size, and the sheep are particularly small. Ælian\* alludes to the largeness of the tails, those of the sheep reaching to their feet, and the tails of the goats almost touching the ground. There are breeds of large-tailed sheep in Western India and Afghanistan called *Dumbas*, but I am unaware of the existence of any breed of goats which are remarkable in this respect. However in India some of the sheep are very goat-like and the contrary is also true. A wild goat of large size, said to be equal to an ordinary donkey, occurs in the western *ghats* and the Nilgiri hills. It is the *Hemistragus hylocrius* of Ogilby.

### 15. ΤΗΞ ΑΓΡΙΟΒΟΥΣ (Ἀγριοβόους.)

*Poephagus grunniens*, Linn.—The Yak.

The above name is that given by Kosmas Indikopleustes, a monkish traveller of the seventh century, to an animal which is most probably the same as one described by Ælian in the passage quoted below. Taking both of these accounts together, I do not hesitate to identify it with the Yak, which occurs not in India, but north of the Himalayan snow ranges. Yaks' tails are even at the present time a regular trade commodity, brought into India through Nepal and other frontier states, and they are much used by Indian potentates for various decorative purposes, insignia, &c., and from them are also made the more humble fly-whisks carried by horsemen.

Ælian says<sup>41</sup>:—"There is found in India a graminivorous animal (ποηφάγων ζῷον), which is double the size of a horse, and which has a very bushy tail, very black in colour. The hair of this tail is finer than human hair, and its possession is a point on which Indian women set great store, for therewith they make a charming coiffure, by binding and braiding it with locks of their own natural hair. The length of a hair is two cubits, and from a single root there spring out in the form of a fringe somewhere about thirty hairs."

Ælian gives also a second and separate description of an animal shaped like a satyr, covered all over with shaggy hair, and having a tail like a horse's. It was found in the mountains skirting the inland frontier of India, in a district called Korinda. When pursued it fled up the mountain sides, rolling down stones on its assailants. This, I think, was probably also the Yak. Compilers like Ælian have often mentioned the same object twice under different titles. "The animal itself is the most timid that is known, for should it perceive that anyone is looking at it, it starts off at its utmost speed, and runs right forward; but its eagerness to escape is greater than the rapidity of its

<sup>40</sup> De Animal Nat., iv. 32.

<sup>41</sup> Hist. Anim., xvi. 21.

pace. It is hunted with horses and hounds, good to run. When it sees that it is on the point of being caught, it hides its tail in some near thicket, while it stands at bay, facing its pursuers, whom it watches narrowly. It even plucks up courage in a way, and thinks that since its tail is hid from view the hunters will not care to capture it, for it knows that its tail is the great object of attraction. But it finds this to be, of course, a vain delusion, for someone hits it with a poisoned dart, who then flays off the entire skin (for this is of value), and throws away the carcass, as the Indians make no use of any part of its flesh."<sup>42</sup>

Kosmas describes it as "an animal of great size, belonging to India, and from it is got what is called the *toupha*, wherewith the captains of armies decorate their horses and their standards when taking the field. They say of it that if its tail be caught by a tree, it no longer stoops, but remains standing through its unwillingness to lose even a single hair. On seeing this, the people of the neighbourhood approach and cut off the tail, and then the creature flies off when docked entirely of its tail."<sup>43</sup>

#### 16. THE PHATTAGES (Φαττάγης).

*Manis pentadactyla*, Linn (?)—The Pangolin.

In Ælian's elsewhere quoted account of the animals of India,<sup>44</sup> which, from internal evidence, is considered by Schwanbeck, as pointed out by Mr. M'Crimble, to have been largely borrowed from Megasthenes, the following passage occurs:—

"In India there is an animal closely resembling the land crocodile, and somewhere about the size of a little Maltese dog. It is covered all over with a scaly skin, so rough altogether, and so compact, that when flayed off it is used by the Indians as a file. It cuts through brass, and cuts iron. They call it the *phattages*." It has been identified by Mr. M'Crimble with the pangolin, or scaly ant-eater. This identification may, perhaps, be correct; but I must confess to some reluctance in accepting it, since the *bajar kit*, as it is called in Sanscrit and Hindostani, seems scarcely to answer the description so well as would one of the land lizards, *Varanus*, or the water lizards, *Hydrosaurus*. In any case, the statement that the skins are used as a file capable of cutting metals must be regarded as apocryphal. The scales and flesh are used medicinally by the natives, being supposed to possess aphrodisiac properties.

<sup>42</sup> Hist. Anim., xvi. 11. Cf. M'Crimble's Megasthenes, p. 164.

<sup>43</sup> De Mundo, xi.

<sup>44</sup> Hist. Anim., xvi. 6. Cf. M'Crimble's Megasthenes, p. 163.



## BIRDS.

## 17. THE EAGLE (Ἄετός)

*Aquila chrysaetus*, Linn.—Golden Eagle. Called *Birkut* in E. Turkestan; *Karakash*, in Kashgaria.

Ælian<sup>45</sup> writes, that “hares and foxes are hunted by the Indians in the manner following:—They do not require dogs for the purpose, but, taking the young of eagles, ravens, and of kites (or, as Lassen translates it, eagles, crows, and vultures), they rear and train them to pursue these animals, by subjecting them to a course of instruction, as follows,” &c.

Lassen suggests that Ælian,<sup>46</sup> by mistake, substituted vultures for falcons. This is probable, since no true vulture could, by any amount of training, be taught to catch either a hare or a fox, the structure of their feet and claws being unadapted for the purpose. But the doubt expressed by the same author, as to whether eagles can be so taught, has been quite set at rest by a quotation from Sir Joseph Fayrer, made by Mr. M’Crindle,<sup>47</sup> to the effect that when the Prince of Wales visited Lahore there were among the people collected about the Government House some Afghans, with large eagles, trained to pull down deer and hares. They were perched on their wrists like hawks.

It may be added, that the members of Sir Douglas Forsyth’s mission to Yarkand and Kashgar, in 1872-3, brought back full accounts of the employment of golden eagles for the same purpose in those regions.

Further, Dr. Scully, in a Paper entitled, “A Contribution to the Ornithology of Eastern Turkestan,”<sup>48</sup> speaking of the golden eagle, says: “The trained bird is very common in Eastern Turkestan, every governor of a district usually having several. It is said to live and breed in the hills south of Yarkand, and near Khoten, where the young birds are caught, to be trained for purposes of falconry. . . . The trained *karakash* is always kept hooded when it is indoors, except when about to be fed, and the method of carrying it to the chase is the following: The man who is to carry the eagle is mounted on a pony, and has his right hand and wrist protected by a thick gauntlet. A crutch, consisting of a straight piece of stick, carrying a curved piece of horn or wood—the concavity being directed upwards—is attached to the front of the saddle; the man grasps the cross piece of the crutch with his gloved hand, and the eagle then perches on his wrist,” &c.

<sup>45</sup> Ancient India, p. 43.

<sup>47</sup> Loc. cit., p. 97.

<sup>46</sup> Loc. cit., p. 81.

<sup>48</sup> Stray Feathers, vol. iv., 1876, p. 123.

## 18. THE BITTAKOS OR PSITTAKOS (Βίττακος, ψιττακός).

*Palaornis eupatrius*, Linn.—*P. Alexandri*, Auctorum.

Ktesias<sup>49</sup> describes the βίττακος as a bird which “has a tongue and voice like the human, is of the size of a hawk, has a red bill, is adorned with a beard of a black colour, while the neck is red like cinnabar; it talks like a man, in Indian; but if taught Greek, can talk in Greek also.” This description serves to distinguish it from among the five or six species of parroquets which occur in India, and it may confidently be identified with the above-named species, which is the largest and most commonly domesticated of them all.

Ælian<sup>50</sup> says he was informed that there were “three species of σιττακός or ψιττακός, all of which, if taught to speak as children are taught, become as talkative as children, and speak with a human voice; but in the woods they utter a bird-like scream, and neither send out any distinct and musical note, nor, being wild and untaught, are able to talk.”

## 19. THE EPOPS (Ἐποψ).

*Eupupa epops*, Linn.—The Indian Hoopoe.

The Indian hoopoe, according to Ælian,<sup>51</sup> “is reputed to be double the size of ours, and more beautiful in appearance; and while, as Homer says, the bridle and trappings of a horse are the delight of a Hellenic king, this hoopoe is the favourite plaything of the king of the Indians, who carries it on his hand, and toys with it, and never tires gazing in ecstasy on its splendour, and the beauty with which nature has adorned it. The Brachmanes make this particular bird the subject of a mythic story,” &c.

The common hoopoe of Northern India is identical with the European bird. In Southern India there is a nearly allied, but smaller bird, *U. nigripennis*. There is, therefore, no foundation for Ælian’s statement that the Indian bird is double the size of the European, it being unlikely that any other bird could have been intended.

It may be added, from Jerdon’s “Birds of India,” that “in captivity it is said to be readily tamed, and to show great intelligence and susceptibility of attachment. Mussulmans venerate the hoopoe on account of their supposing it to have been a favourite bird of Solomon, who is said to have employed one as a messenger.”

<sup>49</sup> Ecloga in Photii, Bibl. lxxii. Cf. M’Crindle’s Ancient India, p. 7.

<sup>50</sup> Hist. Anim., xvi. 1, 15.

<sup>51</sup> Hist. Anim., xvi. Cf. Megasthenes, by J. W. M’Crindle, p. 159.

## 20. THE KERKION (Κέρκιον).

*Eulabes religiosa*, Linn; or *E. intermedia*, Hay.—The Hill Maina.

By Ælian<sup>52</sup> we are told “there is another remarkable bird in India: it is the size of a starling, is parti-coloured, and is trained to utter the sounds of human speech. It is even more talkative than the parrot, and of greater natural cleverness. So far is it from submitting with pleasure to be fed by man, that it has rather such a pining for freedom, and such a longing to warble at will in the society of its mates, that it prefers starvation to slavery with sumptuous fare. It is called by the Makedonians, who settled among the Indians in the city of Boukephala and its neighbourhood, and in the city called Kuropolis, and others, which Alexander the son of Philip built, the *korkion*. This name had, I believe, its origin in the fact that the bird wags its tail in the same way as the water-ousels (οἱ κύγκλοι).”

Jerdon gives as the Hindustani name of *E. religiosa* in Southern India, *kokin maina*, which may be compared with *korkion*. If this handsome and most accomplished musician and talker be not the bird referred to by Ælian, then I can only suggest some of the other less remarkable species of mainas (*Acridotheres*).

## 21. GREEN-WINGED DOVE (Πελειάς χλωρόπτερος).

*Crocopus chlorigaster*, Blyth.—Green Pigeon.

The green pigeons of India, which fly in flocks, and feed upon fruit, are often a puzzle to strangers now, as they appear to have been to Megasthenes, or whatever other author it was from whom Ælian derived his information. He says:<sup>53</sup> “One who is not well versed in bird-lore, seeing these for the first time, would take them to be parrots and not pigeons. In the colour of the bill and legs they resemble Greek partridges.”

There are several species of green pigeons in India; but the one mentioned above is the commonest, and has the widest distribution.

## 22. COCKS OF LARGEST SIZE (Ἀλεκτρυόνες μέγιστοι).

*Lophophorus impeyanus*, Lath.—Monal.

The monal pheasant must, I think, have sat for the following descriptive portrait by Ælian,<sup>54</sup> “There are also cocks which are of extra-

<sup>52</sup> Hist. Anim., xvi. 1.

<sup>53</sup> Hist. Anim., xvi. 1.

<sup>54</sup> Hist. Anim., xvi. 2.

Cf. J. W. M'Crimble. Megasthenes, p. 159.

Cf. J. W. M'Crimble. Megasthenes, p. 160; and Ancient India, p. 36.

ordinary size, and have their crests, not red, as elsewhere, or, at least, in our country, but have the flower-like coronals, *of which the crest is formed*, variously coloured. Their rump feathers again are neither curved nor wreathed, but are of great breadth, and they trail them in the way peacocks trail their tails, when they neither strengthen nor erect them; the feathers of these Indian cocks are in colour golden, and also dark blue, like the *smaragdus*."

It is probable that monal pheasants, captured in the Himalayas, were brought into India for sale, and thus became known to the Greeks. The same bird is, I believe, referred to under the name *Catreus* by Strabo,<sup>55</sup> where he quotes from Cleitarchus, and tells us that the bird was beautiful in appearance, had variegated plumage, and approached the peacock in shape. A suggestion that this was a bird of paradise is therefore absurd, and is otherwise most improbable, since birds of paradise are found not in India but in New Guinea. With this also I am inclined to identify "the partridge larger than a vulture," which, as related by Strabo,<sup>56</sup> on the authority of Nicolaus Damascenus, was sent by Porus, with other presents, in charge of an embassy, to Augustus Cæsar.

### 23. THE KELAS (Κήλας).

*Leptoptilos argala*, Linn.—The Adjutant.

In the following passage from Ælian, we may, I think, recognise the adjutant:—"I learn further, that in India there is a bird which is thrice the size of the bustard, and has a bill of prodigious size, and long legs. It is furnished also with an immense crop, resembling a leather pouch. The cry which it utters is peculiarly discordant. The plumage is ash-coloured, except that the feathers, at their tips, are tinted with a pale yellow."<sup>57</sup>

The pouch and long legs sufficiently identify this bird with the well-known characters of the adjutant.

## REPTILES.

### 24. TORTOISE (Χελώνη.)

*Trionyx*, Sp.? if a true river Tortoise.

In reference to this animal, Ælian<sup>58</sup> tells us that "it is found in India, where it lives in the rivers. It is of immense size, and it has a

<sup>55</sup> *Geographica*, xv. c. 1, § 69.

<sup>57</sup> *Hist. Anim.*, xvi. 4.

<sup>56</sup> *Geographica*, xv. c. 1, § 73.

<sup>58</sup> *Hist. Anim.*, xvi. 14.

shell not smaller than a full-sized skiff (σκάφη), which is capable of holding ten *medinni* (120 gallons) of pulse."

I have not been able to find any account of the maximum sizes to which the shells of the Indian species of *Trionyx* attain, but I believe they do exceed four feet. Ælian's account is too vague, and probably too much exaggerated, for any closer identification. There is a marine chelonian found in the Bay of Bengal, called *Dermatochelys coriacea*, the shell of which, according to Theobald, measures 66 inches over the curve.

It is difficult to suggest a name for the land tortoise, which Ælian describes as being the size of a clod of earth when turned by the plough in a yielding soil, as it might belong to several of the genera represented in Western India. He states that "they are said to cast their shells," which is of course an impossibility. He concludes by saying "they are fat things, and their flesh is sweet, having nothing of the sharp flavour of the sea-tortoise." An exact identification of this animal, so superior to the turtle, should prove of interest to aldermen.

#### 25. THE SERPENT A SPAN LONG (Ὀφίς σπιθαμιαίος.)

*Eublepharis* Sp.—*Biscopra* of the natives.

Photios<sup>59</sup> and Ælian<sup>60</sup> describe, on the authority of Ktesias, a snake, which I feel unable to identify with any degree of certainty. The account by the former is the more concise of the two, and is as follows:—"In India there is a serpent a span long, in appearance like the most beautiful purple, with a head perfectly white, but without any teeth. The creature is caught on those very hot mountains whose rivers yield the sardine-stone. It does not sting, but on whatever part of the body it casts its vomit, that place invariably putrifies. If suspended by the tail, it emits two kinds of poison—one like amber, which oozes from it while living, and the other black, which oozes from its carcass. Should about a sesami-seed's bulk of the former be administered to anyone, he dies the instant he swallows it, for his brain runs out through his nostrils. If the black sort be given it induces consumption, but operates so slowly that death scarcely ensues in less than a year's time."

The lizard named above, the *Biscopra* of the natives, though toothless, is regarded as being very poisonous, and on this account I suggest, but with hesitation, that it may be the animal. It may, however, have been a true snake.

#### 26. THE SKOLEX (Σκώληξ).

*Crocodilus*, vel *Gavialis*.—The Crocodile, or Garial.

Several authors who have derived their information from Ktesias give accounts of the *Skolax*. The most complete is that by Ælian<sup>61</sup>

<sup>59</sup> Ecloga in Photii, Bibl. lxxii. 16.

<sup>60</sup> Hist. Anim., iv. 36. Cf. Anc. India, by J. W. M'Crimble, p. 48.

<sup>61</sup> De Nat. An., v. 3; Cf. Anc. Ind., by J. W. M'Crimble, pp. 7, 23, 27, 56, 58.

as follows:—"The river Indus has no living creature in it except, they say, the *Skolex*, a kind of worm, which to appearance is very like the worms that are generated and nurtured in trees. It differs, however, in size, being in general seven cubits in length, and of such a thickness that a child of ten could scarcely clasp it round in his arms. It has a single tooth in each of its jaws quadrangular in shape, and above four feet long. These teeth are so strong that they tear in pieces with ease whatever they clutch, be it a stone or be it a beast, whether wild or tame. In the daytime these worms remain hidden at the bottom of the river, wallowing with delight in its mud and sediment, but by night they come ashore in search of prey, and whatever animal they pounce upon, horse, cow, or ass, they drag down to the bottom of the river where they devour it limb by limb, all except the entrails. Should they be pressed by hunger they come ashore even in the daytime; and should a camel then, or a cow, come to the brink of the river to quench its thirst, they creep stealthily up to it, and with a violent spring, having secured their victim by fastening their fangs in its upper lip, they drag it by sheer force into the water, where they make a sumptuous repast of it. The hide of the *Skolex* is two finger-breadths thick. The natives have devised the following methods for catching it. To a hook of great strength and thickness they attach an iron chain, which they bind with a rope made of a broad piece of cotton. Then they wrap wool round the hook and the rope, to prevent them being gnawed through by the worm, and having baited the hook with a kid, the line is thereupon lowered into the stream. As many as thirty men, each of whom is equipped with a sword, and a spear (harpoon), fitted with a thong, hold on to the rope, having also stout cudgels lying ready to hand, in case it should be necessary to kill the monster with blows. As soon as it is hooked and swallows the bait, it is hauled ashore, and dispatched by the fishermen, who suspend its carcass till it has been exposed to the heat of the sun for thirty days. An oil all this time oozes out from it, and falls by drops into earthen vessels. A single worm yields ten *kotulai* (about five pints). The vessels having been sealed up, the oil is despatched to the king of the Indians, for no one else is allowed to have so much as one drop of it. The rest of the carcass is useless. Now, this oil possesses this singular virtue, that if you wish to burn to ashes a pile of any kind of wood, you have only to pour upon it half a pint of the oil, and it ignites without your applying a spark of fire to kindle it; while if it is a man or a beast you want to burn, you pour out the oil, and in an instant the victim is consumed. By means of this oil also the king of the Indians, it is said, captures hostile cities without the help of rams or testudos, or other siege apparatus, for he has merely to set them on fire with the oil and they fall into his hands. How he proceeds is this: Having filled with the oil a certain number of earthen vessels, which hold each about half a pint, he closes up their mouths and aims them at the uppermost parts of the gates, and if they strike them and break, the oil runs down the woodwork, wrapping it in flames

which cannot be put out, but with insatiable fury burn the enemy, arms and all. The only way to smother and extinguish this fire is to cast rubbish into it. This account is given by Ktesias the Knidian."

As regards the *Skolex*, I think we need not hesitate to identify it with the crocodile—the nature of the bait, a kid, used in its capture sufficiently proves that—in spite of the incorrect description of the animal itself; but although the oil of crocodiles is sometimes extracted and applied to various medicinal and other purposes by native fishermen, the substance here described, and to which this origin was ascribed, was probably petroleum, the true source of which was not well understood, although Ktesias elsewhere refers to a lake upon the surface of which oil floated.

As is pointed out on p. 333, the supposed product of the *dikairon* was probably *Churrus* (Indian hemp), so I would suggest that the *Skolex* oil was petroleum from the Punjab<sup>62</sup> oil springs, where it appears to have been well known and held in high esteem for its various properties since the earliest times. Ktesias's account confers upon it characteristics which were probably somewhat exaggerated. They may be compared with those of substances not unknown at the present day to persons of the Nihilist and similar fraternities. We have it on record, however, that fire-balls, prepared with Punjab petroleum, were employed as missiles to frighten the war elephants of a Hindu king by a Mahomedan invader eight hundred years ago. In their accounts the Mahomedan historians make use of a word signifying naphtha, so that gunpowder was not intended, as has sometimes been supposed.<sup>63</sup>

When carried as far as Persia, away from its source, it probably acquired the mythical origin described by Ktesias; and the account of the animal itself was so distorted that the Greeks did not recognize the same animal as the crocodile of the Nile, which was of course known to them. At the same time it should be remembered that the Garial (not Gavial, as it is incorrectly called) occurs in the Indus, and would, no doubt, seem a strange animal even to people well acquainted with the crocodile of the Nile.

Another mention of Indian crocodiles is to be found in the *Periplus*, where it is said that, when approaching the Sinthus (*i. e.* Indus) river, "the sign by which voyagers, before sighting land, know that it is near, is their meeting with serpents (sea snakes) floating on the water; but higher up, and on the coasts of Persia the first sign of land is seeing them of a different kind, called *graii*" (Sansk., *graha*, a crocodile).<sup>64</sup>

<sup>62</sup> Cf. *Economic Geol. of India*, p. 126.

<sup>63</sup> See *Jour. Soc. Arts*, April 28, 1882, p. 595.

<sup>64</sup> Cf. *Periplus of the Erythraean Sea*, by J. W. M'Crimble, p. 107.

27. SERPENT (ὄφίς).

*Python molurus*, Linn.—The Python.

Pliny<sup>65</sup> tells us that, according to Megasthenes, "serpents in India grow to such a size that they swallow stags and bulls whole."

This is a somewhat exaggerated account of the capabilities of the Indian python, which is, however, sometimes thirty feet long, and three feet, or even more, in circumference. That it can kill and eat deer seems to be a well-attested fact, though how it would dispose of one with horns I cannot say. I know of one story recorded by an Englishman,<sup>66</sup> where in Sambalpur the natives were in the habit of tethering goats near some rocks occupied by a monster snake, as an offering, which he very freely accepted and disposed of.

There is an account by Capt. E. A. Langley<sup>67</sup> of an encounter between one of these snakes of the above dimensions and a sportsman, whose dog was first killed by the snake. After it had been shot, a dead deer was found, which it had been about to swallow when disturbed by the dog.

The stories of monster snakes killing and eating horned cattle seem more than doubtful.

28. (ὄφίς θαλάσσιος).

*Hydrophis*, Sp. (?)—Sea-snakes.

The sea-snakes of the Indian seas are thus referred to by Ælian:<sup>68</sup> "The Indian sea breeds sea-snakes, which have broad tails, and the lakes breed hydras (crocodiles?) of immense size; but these sea-snakes appear to inflict a bite more sharp than poisonous."

The species of *Hydrophis* have broad tails, as described by Ælian; but he underrates the effects of their bite; for although, as Mr. Theobald<sup>69</sup> states, "their fangs are small, their venom is extremely potent."

They may be seen swimming in numbers near some parts of the coast of the peninsula of India and the islands of the Bay of Bengal. I have taken them in a net towed from the deck of a steamer; and on one occasion, on the island of Preparis, I came upon an eagle (*Cuncuma lecoogaster*) in the act of eating one; quite a pile of snake bones being at the foot of what was evidently his favourite perch.

Ælian's *hydras* I cannot identify, unless they be crocodiles; but these he elsewhere describes, under the name *skolex*. (See p. 326.)

<sup>65</sup> Hist. Nat., viii. 14, 1.

<sup>66</sup> Motte in Asiatic Annual Register, London, 1766.

<sup>67</sup> Narrative of a Residence at the Court of Meer Ali Moorad.

<sup>68</sup> Hist. Anim., xvi. 2, 8. Cf. Megasthenes, by J. W. M'Crindle, p. 163.

<sup>69</sup> Catalogue of Reptiles of British India, Appendix, p. 2.



Although I am not yet prepared to identify the fish, crustaceans and mollusca, which are mentioned by our Greek authors, owing to the vagueness of the descriptions, I anticipate some success with them hereafter, but am compelled to reserve that part of the subject for the present, and therefore pass now to the insects.

## INSECTS.

### 29. HONEY (Μέλι).

*Apis dorsata* (?)—Bees. *Bonhra*, Hin.

Photios tells us, on the authority of Ktesias,<sup>70</sup> that "there is a certain river flowing with honey out of a rock, like the one we have in our own country."

I venture to think that this story may have possibly originated in the fact that the rocky gorges of many Indian rivers are the favourite haunts of wild bees. To those who know India, the famous marble rocks on the Narbada will suggest themselves; and all who have actually visited that remarkable gorge where the river is bounded by lofty cliffs of pure white marble, will remember the ladders which hang suspended from the summits, by which the honey-seekers descend to rob the combs. What more natural than that honey brought from such a spot should be made the object of a story like that related by Ktesias.

Perhaps we may venture a step further, and suggest that the following statement, by Strabo,<sup>71</sup> quoting from Megasthenes, had the same origin:—"Stones are dug up in India which are of the colour of frankincense, and sweeter than figs or honey." But the probability of some form of sugar-candy, the true origin of which was then unknown, having given rise to this story, should not be forgotten (*cf.* p. 335).

### 30. THE INDIAN MURMEX (Μύρμηξ ὁ Ἰνδός).

*Termes*, *Sp.* (?)—Termites, or White Ants.

The termites, or white ants, as distinguished from the gold-digging ants, receive special attention at the hands of Ælian, whose account appears to have been derived from an author named Iobas. He says: "Nor must we forget the Indian ant, which is so noted for its wisdom. The ants of our country do, no doubt, dig for themselves subterranean holes and burrows, and by boring provide themselves with lurking

<sup>70</sup> Ecloga in Photii, Bibl. lxxii. 13 (καὶ ποταμὸν φησιν ἐκ πέτρας ῥέοντα μέλι).

<sup>71</sup> Geographica, xv. c. 1, § 37.

places, and wear out all their strength in what may be called mining operations, which are indescribably toilsome, and conducted with secrecy; but the Indian ants construct for themselves a cluster of tiny dwelling-houses, seated, not on sloping or level grounds, where they could easily be inundated, but on steep and lofty eminences,"<sup>72</sup> &c., &c.

The above with its context affords a good description of Indian white ants, or termites, which, unlike true ants, have soft, defenceless bodies, and have therefore to protect themselves by their earthworks. Besides constructing the well-known so-called ant-hills, they, when extending the range of their foraging grounds, protect every step of their progress by covered passages, built up of minute pellets of moistened clay.

31. **ΕΛΕΚΤΡΟΝ** (\*Ηλεκτρον) (Θηρία τὸ μέγεθος ὅσον γίνονται ἀντὶ οἱ κάρθαροι).

*Coccus lacca*.—The Lac Insect, and its Products, Shell Lac and Lac Dye.

None of the commentators on the ancient accounts of India appear to have suggested that the *elektron*, to which reference is not unfrequently made, can be identified with a known production of India. Lassen, however, suggested that it was a gum exuding from trees. There are several points in the following descriptions which point with certainty to the fact that it was crude shell-lac, which is a secretion that surrounds the female lac insect, whose body forms the material of lac dye.

From Photios's extracts, as given by Mr. M'Crindle,<sup>73</sup> we learn that, "Through India there flows a certain river, not of any great size, but only about two stadia in breadth, called in the Indian tongue, Hyparkhos (\*Υπαρχος), which means in Greek, φέρων πάντα τὰ ἀγαθὰ (i. e. the bearer of all good things). This river, for thirty days in every year, floats down amber, for in the upper part of its course, where it flows among the mountains, there are said to be trees overhanging its current which for thirty days, at a particular season in every year, continue dropping tears like the almond tree, and the pine tree, and other trees. These tears, on dropping into the water, harden into gum. The Indian name for the tree is *Siptakhora* (Σιπτάχορας),<sup>74</sup> which means, when rendered into Greek, γλυκὺς (i. e. sweet). These trees, then, supply the Indians with their amber. And not only so, but they are said to yield berries, which grow in clusters like the grapes of the vine, and have stones as large as filbert nuts of Pontus."

Further on we read: "In the same parts there is a wild insect, about the size of a beetle, red like cinnabar, with legs excessively long.

<sup>72</sup> Hist. Anim., xvi. 15. Cf. Megasthenes, by J. W. M'Crindle, p. 167.

<sup>73</sup> Ancient India, by J. W. M'Crindle, pp. 20, 21.

<sup>74</sup> *Aphytacara*, according to Pliny, Nat. Hist., xxxvii. 11.

It is soft as the worm called skôlex, and is found on the trees which produce amber, eating the fruits of those trees, as in Greece the wood-louse ravages the vine-trees. The Indians grind these insects to a powder, and therewith dye such robes, tunics, and other vestments as they want to be of a purple hue." Speaking of the race Kynokephaloi, they are said to "eat the fruit of the *Siptakhora*, the tree which produces amber, for it is sweet. They also dry this fruit, and pack it in hampers, as the Greeks do raisins. The same people construct rafts, freight them with the hampers as well as with the flowers of the purple plant (*vide* p. 344), after cleansing it, and with 260 talents weight of the dried fruits, and a like weight of the pigment which dyes purple, and 1000 talents of amber. All this cargo, which is the season's produce, they convey annually as tribute to the king of the Indians."

In spite of exaggeration, in the account above given of the red insects, I think they may be safely identified with the so-called lac insects, *Coccus lacca*. They cannot have been cochineal insects, as has been suggested, since they do not occur in India. The elektron was certainly shell-lac, as above stated. The Periplus mentions Λάκκος χρωμαίνων, coloured lac, as an export to Adouki from Ariakê, which, whether it means the dye itself, or garments coloured by it, as has been suggested, sufficiently proves that the substance was known at that early time. The *Siptakhora* tree presents some difficulty, owing to its combining attributes belonging to two distinct trees, which, however, grow in the same region. The tree which most abundantly yields lac is the *Khusum*—*Schleichera trijuga*. It is found on others too; but not, so far as my experience goes, on the *Mhowa* (*Bassia latifolia*), the dried flowers of which are brought down from the mountainous regions in baskets for sale in the plains. The flowers are used both as food and in the manufacture of a spirit, the well-known *Mhowa* spirit.<sup>75</sup> It is possible that some of the confusion may have arisen from the fact that the *Mhowa*, like other trees belonging to the same natural order, does exude a gum. The fruit of the *Khusum*, though edible, is not so treated. The *fruits* of the *Mhowa* include stones, and grow in clusters.

These identifications, taken together with the statement of Pliny, that the Hyparkhos, or Hypobaros river flows into the Eastern Sea, enable us, I think, so far to localise it as to say, that it was one of those which rise in Western Bengal (or Orissa), and among them it may have been either the Damuda, the Dalkissar, Kossai, Brahmini, or Mahanadi. Possibly the old native names of these, which I cannot at the moment refer to, may help to elucidate the identification.

As for the race called Kynokephaloi, they are subjects fit for separate examination, it being here sufficient to suggest that they were a Kolarian race.

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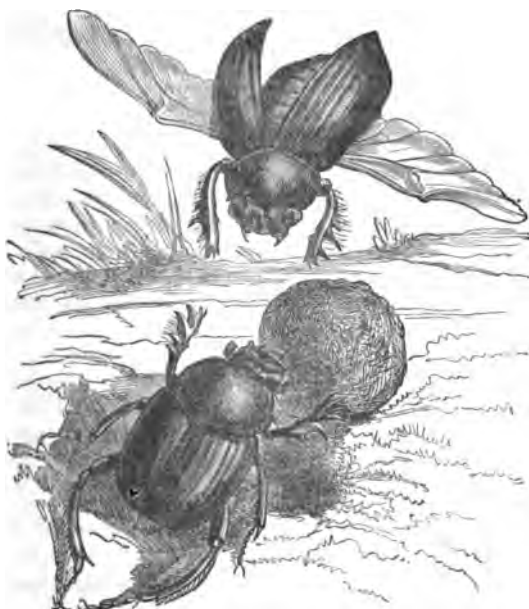
<sup>75</sup> Cf. *Jungle Life in India (passim)*.

32. THE DIKAIIRON (Δίκαιρον).

*Scarabæus sacer*, Linn. (?)—The Dung Beetle.

Under the name *Dikaiiron*, Ktesias described, according to Photios<sup>76</sup> and Ælian,<sup>77</sup> a bird! of the size of a partridge's egg, which buried its dung in the earth. To this dung, which was said to be an object of search, the properties of an opiate and poison were attributed. It was so precious that it was included among the costly presents sent by the king of the Indians to the Persian monarch, and no one in Persia possessed any of it except the king and his mother.

By the Greeks it was called δίκαιον (i. e. just), that being probably the nearest approximation of a known word to the Indian or Persian name. This so-called bird! was, I believe, one of the *Coprophagi* of Latreille, namely, the common dung beetle called *Gobaronda* in Hindustani, which buries pellets of cattle droppings as a receptacle for its eggs and food for the larvæ when hatched.



*Scarabæus sacer*.—Linn.

I do not know whether these pellets are used medicinally, though it is not improbable that they are, but I strongly suspect that the substance, described by Ktesias, to which he has attributed this origin

<sup>76</sup> *Ecloga*. in Photii, Bibl. lxxii. 17.

<sup>77</sup> *De Nat. An.*, iv. 41.

was *Churru*, a resinous product of Indian hemp (*Cannabis sativa*). It cannot have been opium, as it was not introduced into India till a later period.

I remember when in the valley of the Indus being very much struck with the rapidity with which these scarabæi formed pellets from cattle droppings and rolled them across the sand to suitable spots for burying. The pellets are often larger than the beetles themselves, and the method of rolling them is curious, as the beetle goes backwards, guiding the ball with his long hind legs and walking on the two pairs of fore-legs.

The foregoing illustration, for which I am indebted to Messrs. Cassell & Co., though not representing this attitude, will aid the reader towards understanding the origin of this myth.

It would not be difficult to give examples of almost as extravagant ideas of the origin of many of our drugs which were till recently accepted. There are some even to the present day the true source of which is unknown.

The above may be compared with the suggestion on page 328, that the oil of the *skolax* was in reality rock oil or petroleum from the Punjab.

## PLANTS.

It would be going beyond the special limits of this Paper to attempt any discussion as to the identity of plants mentioned by our authors, but not belonging to India. I should not possess in such an analysis the qualification which has been of so much aid to me with reference to the productions of India, namely, a, so to speak, personal acquaintance with them as they appear, and are regarded by the natives in the country itself.

### 1. RICE (\*Ορυζα).

*Oriza sativa*, Linn.—Rice.—(Sansk. *Virihī*).

In the Periplus, we are told that *oriza*, which all agree was rice, was produced in Oraia and Arai-kê, and was exported from Barugaza to the Barbarine markets and the Island of Diskorides, i. e. Socotra.

### 2. HONEY FROM CANES CALLED SUGAR (Μέλι τὸ καλᾶμινον τὸ λεγόμενον σαχαρ).

*Saccharum officinarum*, Linn.—Sugar Cane, its product called *Sarkara* in Sanskrit, and *Sukkar* by the Arabs.

According to the Periplus it was exported from Barugaza (i. e. Bharoch), to the markets of Barbaria.

Mr. M'Crindle's<sup>76</sup> *resumé* of the writings of the ancients with regard to this substance is of such interest that I quote it *verbatim* here :

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<sup>76</sup> Periplus of the Erythraean Sea, by J. W. M'Crindle, p. 23.

"The first western writer who mentions this substance is Theophrastos, who continued the labours of Aristotle in Natural History. He called it a sort of honey extracted from reeds. Strabo states, on the authority of Nearkhos that reeds in India yield honey without bees. Ælian (*Hist. Anim.*) speaks of a kind of honey pressed from reeds which grew among the Prasi. Seneca (Epist. 84) speaks of sugar as a kind of honey found in India on the leaves of reeds, which had either been dropped on them from the sky as dew, or had exuded from the reeds themselves. This was a prevalent error in ancient times, *e. g.* Diskorides says that sugar is a kind of concreted honey found upon canes in India and Arabia Felix; and Pliny, that it is collected from canes like a gum. He describes it as white, and brittle between the teeth, of the size of a hazel nut at most, and used in medicine only. So also Lucian, alluding to the Indians near the Ganges, says that they quaff sweet gums from tender reeds."

It has been conjectured that the sugar described by Pliny and Dioskorides was sugar-candy obtained from China." See page 330, where I have suggested that this was the origin of the "stones sweeter than figs or honey," which were supposed to have been dug out of the earth.

### 3. Φλοιός.

*Papyrus pangorei*, Nees. (?)—Papyrus Reed.

According to Herodotus<sup>79</sup> "the Indians wear garments (ἱσθητες φλοιῶνα) made from a plant which grows in the rivers. Having collected and beaten it, they interweave it in the form of a mat, and they clothe themselves with it after the manner of a cuirass."

The above-named species of papyrus is commonly used for weaving into mats, and is sometimes used by fishermen as a protection for their bodies from wet and cold. In some respects the description would suit either hemp (*Cannabis sativa*, Linn.) or jute (*Corchorus capsularis*, Linn.); but on the whole I cannot accept that it was the fibre of either of these to which Herodotus refers, especially as regards hemp, since he elsewhere<sup>80</sup> describes its use by the Skythians, and compares its qualities with those of flax.

If not the papyrus, it was probably one of the other species of marsh plants<sup>81</sup> of which mats are made in India at the present day. "The luxuriance of the grasses and reeds in Sind," says Captain Langley,<sup>82</sup> "especially near the Indus, surpasses anything I ever saw elsewhere. The reed known as *kana* grows to an immense height, is notched like the bamboo, and has a beautiful feathery head. This reed is invaluable to the Sindians for huts, mats, baskets, chairs, &c.

<sup>79</sup> Phalio, III. cap. xcviii.

<sup>80</sup> Phalio, III. cap. cclii., & IV. caps. lxxiv., lxxv.

<sup>81</sup> *Saccharum sara*, Roxb., and *S. spontaneum*, Linn., &c. &c.

<sup>82</sup> Narrative of a Residence at the Court of Meer Ali Moorad, vol. i. p. 275.

It grows in large tufts, and vast tracts are covered with it between Khyrpur and the river." This *kana* (*Typha elephantina*, Roxb.) could certainly not have been the plant from which canoes were made, as has been suggested by some of the critics.

For purposes of mere flotation it is used by fishermen and others when dried and tied in bundles, but the suggestion that the boats capable of holding several persons, mentioned by Herodotus, were made of it, is obviously absurd.

#### 4. THE INDIAN REED (*Káλαμος Ἰνδικός*).

*Borassus flabelliformis*, Linn.—The Palmyra Palm.

It appears to have been calmly accepted by commentators that "the Indian reed," referred to by Grecian and Latin authors, was the same as the plant to which we give the name bamboo. So far as I have read their writings, excepting the alternatives mentioned below, I have not met with any suggestion that this identification is incorrect.<sup>63</sup> To show in the first place that it is so, and secondly to name a plant which fulfils the required conditions, is however not difficult.

The facts that the bamboo does not attain more than about one-third of the size of the so-called reed; that it could not, therefore, have been used for the purposes for which the Indian reed is said to have been employed, and the absence of the larger kinds of bamboo from the region of the lower Indus valley, all combine to prove that the above identification of the commentators must be rejected.

The more important among the numerous references to the Indian reed are the following:—Herodotus<sup>64</sup> speaks of the inhabitants of the marshes, which are formed by the flooding of rivers in India, as fishing from canoes formed of canes, which are cut from node to node, each segment forming a boat. Pliny<sup>65</sup> gives a similar account, and says that these boats traverse the Accesines (i. e. Chenab river). So also Diodorus Siculus,<sup>66</sup> who has written to the following effect:—"In India the lands bordering rivers and marshes yield reeds of prodigious size. It is all that a man can do to embrace one. Canoes are made from them."

Ktesias's account, as given by Photios,<sup>67</sup> is that the Indian reed grows along the course of the Indus, and that it is "so thick that two men could scarcely encompass its stem with their arms, and of a height equal to that of a mast of a merchant ship of the heaviest burden. Some are of a greater size even than this, though some are of less, as might be expected, since the mountain it grows on is of vast range.

<sup>63</sup> Sprengel includes the rattan, *Calamus rotang*, in his identification. This is, if possible, a plant still more unsuited to the requirements of the case.

<sup>64</sup> *Thalie*, book III., xcviii.

<sup>65</sup> *Hist. Nat.*, lib. VII., cap. ii., tom. i, p. 372, line 22; and lib. XVI., cap. xxxvii. tom. ii., p. 27, line 32.

<sup>66</sup> *Bibl.*, lib. II., § xvii., p. 132.

<sup>67</sup> *Cf.* *Ancient India*, by J. W. M'Crinde, p. 10.

The reeds are distinguished by sex, some being male and others female. The male reed has no pith and is exceedingly strong, but the female has a pith."<sup>88</sup> Tzetes,<sup>89</sup> Theophrastus,<sup>90</sup> and Strabo<sup>91</sup> are other authors who treat of this subject. I have on the preceding page given an account of the *kana* reed (*Typha elephantina*, Roxb.), which has been suggested as an alternative with the bamboo by Lassen; but although, as stated, bundles of its slender stalks, when dried, are used for mere purposes of flotation on the Indus, it cannot have been made into canoes.

Statements made by Lassen and Sprengel, that the bamboo sometimes has a diameter of two feet, are quite incorrect. Nine inches is an extreme and very exceptional limit,<sup>92</sup> and as the larger species of bamboo do not occur near the Indus, on account of their only flourishing in moist tropical climates, we must look to some other tree as having furnished, when the stem was split, almost ready-made boats capable of holding several people. At the present day, excluding timber dug-outs, made of *Bombax*, &c., the only trees so employed are palms; and among the species so used, namely the cocoanut, the date-palm, and the palmyra, (*Borassus flabelliformis*, Linn.), I should be inclined to give the preference to the latter, as it is cultivated in Lower Sind. The diameter of a full-grown tree is from 18 to 24 inches, or the circumference is, say, six feet at the base; the height is from 40 to 60 feet, and in favourable localities, as in Burma, 100 feet. Canoes, capable of holding two or three people, are made from the stems of this palm in many parts of India at the present day. It is noteworthy, moreover, that the Sanscrit name is *Trinaraja*, i.e. king of the grasses or reeds. The *Phœnix dactylifera*, or date-palm, which is now the common palm in the Indus valley, attains a height of 100 to 120 feet, and the trunks of male trees are, I believe, used for canoes; but if, as is stated by Brandis,<sup>93</sup> it was only introduced into Sind in the eighth century, it cannot have been the tree mentioned by our ancient authors.

## 5. THE NAUPLIUS (Ναύπλιος).

### *Cocos nucifera*.—The Indian Cocconut

Under the name Nauplius, which Müller suggests, as stated by Mr. M'Crindle, is a mistake for *ναργυλιος* (the Arabian *narigil*, or Sanskrit *ndrikela*), the author of the Periplus,<sup>94</sup> refers to the cocconut, while Kosmas<sup>95</sup> gives a very good description of it, under the name *argellia*, evidently a transliteration of the native name minus the initial *n*.

<sup>88</sup> Cf. Ancient India, by J. W. M'Crindle, p. 10.

<sup>89</sup> Chil. vii., v. 739, from third book of 'Αραβικιον of Uranius.

<sup>90</sup> Plant Hist., ix. 11.

<sup>91</sup> Ibid. xv. 21.

<sup>92</sup> Brandis' Forest Flora, p. 554, gives for the stems of *Bambusa arundinacea*, Retz, diameters varying from four to nine inches.

<sup>93</sup> Forest Flora, p. 553.

<sup>94</sup> The Erythraean Sea, by J. W. M'Crindle, p. 26.

<sup>95</sup> Ancient India, p. 95.



## 6. THE PAREBON TREE (Πάρεβον).

*Ficus religiosa*, Linn.—The *Pipal*, Hin.

The *parebon* tree, as described by Ktesias, according to Photios,\* was "a plant about the size of the olive, found only in the royal gardens, producing neither flower nor fruit, but having merely fifteen roots, which grow down into the earth, and are of considerable thickness, the very slenderest being as thick as one's arm. If a span's length of this root be taken it attracts to itself all objects brought near it (πάντα ἔλκει πρὸς αὐτήν), gold, silver, and copper, and all things except amber. If, however, a cubit's length of it be taken, it attracts lambs and birds, and it is, in fact, with this root that most kinds of birds are caught. Should you wish to turn water solid, even a whole gallon of it, you have but to throw into it but an obol's weight of this root, and the thing is done. Its effect is the same upon wine, which, when condensed by it, can be held in your hand like a piece of wax, though it melts the next day. It is found beneficial in the cure of bowel disorders."

My reasons for identifying the above with the *pipal* tree (*Ficus religiosa*) are as follow:—Though of common occurrence in the moist tropical parts of India, it is seldom found except where cultivated in gardens and plantations in the Punjab and the arid tracts of Northern India generally, where, as it does not flourish, it is probably not often larger than a well-grown olive tree.

Its small figs are inconspicuous, scarcely exceeding the larger varieties of peas in size, so that it might easily have been supposed to have had neither flowers nor fruit. Its roots sometimes clasp other trees in their embrace, and they are generally visible at the surface of the ground for some distance away from the trunk. There is no limit, however, to their number.

Being regarded as sacred by the Hindus, offerings of various emblems and idols are often to be seen placed round the trunk; in some cases ancient stone implements and other stones of curious and grotesque shapes may be observed thus collected around it. In these facts I would suggest that the myth as to the attractive power of the roots, or, as Apollonius has it, the tree itself, for metals and stones, may very probably have originated.

Its "attractive" power for birds and other animals is very readily explained, since from the glutinous juice which exudes from the stem bird-lime is commonly made; and it may be that the "attraction" for metals, &c., merely adheres to some adhesive substance prepared from this juice. The effects of the fresh juice when dropped into water or wine might possibly be to thicken them, but perhaps not to

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\* Ecloga in Photii, Bibl. lxxii. Cf. Ancient India, by J. W. M'Crindle, p. 20.

the extent stated by Ktesias. As to the medicinal properties, the seeds are believed to be cooling and alterative, and the leaves and young shoots are used as a purgative.

To the above, which constitute strong reasons in favour of this identification, there may be added, that although at first sight the name *pīpal* presents no very close resemblance to *parebon*, still, when written as it is often pronounced, *peepun*, the *l* being replaced by *n*, it is not difficult to understand how the sound may have suggested to the ear of the Greek writer a combination of letters which he represented by *πάρηβον*.

7. TREES BEARING WOOL (τὰ δὲ δένδρεα τὰ ἄγρια αὐτόθι φέρει καρπὸν ἑρία).

*Gossypium indicum*, Lam.—Cotton Tree.

No claim can be made here for originality in identifying with cotton the substance mentioned in the following extracts. It is an identification about which commentators are agreed. It is only mentioned here on account of some special points of interest connected with it; but it might have been omitted for the same reason that so many other substances have been, namely, that their identity is not doubtful.

Herodotus<sup>97</sup> says: "One sees, besides, wild trees which, instead of fruit, carry a species of wool more beautiful and better than that of the sheep. The Indians dress themselves with the wool which they collect from these trees."

Ktesias, as related by several of his commentators, refers to the trees in India which bear wool.

Arrian, quoting from Nearchos, also refers to this product, which, in its woven state, was new to the Greeks who went to India in the army of Alexander.

A cotton from stones, mentioned by some early authors, appears to have been asbestos, as I have elsewhere suggested.<sup>98</sup>

The *κάπραος*, mentioned in the Periplus as an export from Ariake to Egypt, was the Sanscrit *kārpāsa*, signifying fine muslin. The name survives in the modern Hindustani word *kapas*, cotton.

8. THE SIPTAKHORA TREE (Σιπτάχορας).

*Schleichera trijuga*, Wild, and *Bassia latifolia*, Roxb.

In the account of ἡλεκτρον, on page 331, the identification of the *Siptakhora* has, by anticipation, been already suggested. It appears to combine the characteristics of two trees which are found in the same tract of country. The *Khusum* tree (*Schleichera trijuga*) was probably

<sup>97</sup> Thalie, lib. III. c. ovi.

<sup>98</sup> Proceedings, Royal Dublin Society, 1883, p. 83.

the tree which yielded the shell-lac, and it seems to have been confused with the *mhowa* (*Bassia latifolia*), since from the latter there exudes a gum without the aid of lac insects. It may, I think, be accepted as almost certain that the so-called dried fruits were, as has been explained, the dried flowers of the *mhowa*, which are at the present time largely used as an article of food, and for the extraction of an intoxicating spirit by distillation. Both trees are found together in the same jungles.

#### 9. LYCIUM (Λύκιον).

*Berberis tinctoria*, D. C., and *B. lycium*, Royle.

This substance, which, according to the Periplus,<sup>99</sup> was exported from Barbarikon (i. e. a town on the Indus, in Indo-skythia), and from Barugaza, i. e. Bharoch, was a plant whose roots yielded a dye, and the extract medicine.

It has already been identified, as pointed out by Mr. M'Crindle,<sup>100</sup> with the *rusot* of the natives, which is prepared from the two species of Berberry named above. The first of them, *B. tinctoria*, is found both in the Himalayas and the mountains of Southern India and Ceylon; but the other species is only known from the Himalayas.<sup>101</sup>

#### 10. BDELLIUM (Βδέλλα, or Βδέλλιον).

*Balsamodendron mukul*, Hooker. Called *Gugal* in Sind.

It appears to be generally admitted now, that this is the species of tree which yielded the gum-resin known to the ancients as Bdelium, and which, according to the author of the Periplus, was exported from Barbarikon on the Indus, and from Barugaza.

Dr. Stocks has described the collection of Indian Bdelium as follows<sup>102</sup>:—"In Sind the *Gugal* is collected in the cold season by making incisions with a knife in the tree, and letting the resin fall on the ground. It exudes in large tears soft and opaque, hardens and turns brownish black very slowly, a single tree is said to yield from one to two pounds weight. It is brought to the bazaars of Hyderabad and Karachi, where it sells at the rate of four shillings for 80lbs.

The Bdelium of Scripture was, it is supposed, a siliceous mineral allied to onyx.

<sup>99</sup> The Periplus of the Erythraean Sea, by J. W. M'Crindle, p. 22.

<sup>100</sup> *Loc. cit.*

<sup>101</sup> Cf. Forest Flora, by D. Brandis, p. 22.

<sup>102</sup> Cf. Forest Flora, by D. Brandis, p. 14.

## 11. PEPPER (Πέπερι).

*Piper nigrum*, Linn.—Black Pepper (Sansk., *pippali*).

Mr. M'Crimble's note on this subject, when referring to the mention of it in the Periplus, is as follows:—"Kottonarik pepper exported in large quantities from Mouziris and Nilkunda; long pepper from Barugaza. Kottonara was the name of the district, and Kottonarikon the name of the pepper for which the district was famous. Dr. Buchanan identifies Kottonara with Kadattanadu, a district in the Calicut country celebrated for its pepper. Dr. Burnell, however, identifies it with Kolatta nadu, the district about Tellicherry, which, he says, is the pepper district."

Malabar continues to produce the best pepper in the world; but Sumatra and other islands cultivate and export largely.

The pepper vine is planted near trees which it ascends to the height of 20 or 30 feet. The berries, which are collected before being quite ripe, are dried in the sun; white pepper only differs from black by having the outer skin removed, for which purpose the berries are first macerated.

## 12. MALABATHRUM (Μαλάβαθρον).

*Cinnamomum tamala*, Nees, and *Dalchini*, Hin.

The leaves of this tree, which are known to the natives of India as *teupat* or *tajpat*, appear to be identical with the Malabathrum of the Greeks. It was obtained by the Thinaï from the Sesatai, and exported to India, conveyed down the Ganges to Gange, near its mouth; and it was also brought from the interior of India to Mouziris and Nilkunda for export.

Mr. M'Crimble<sup>103</sup> who seems to regard it as identical with betel (*Chavica betel*, Mig.), from which, however, it is quite distinct, mentions that according to Ptolemy (vii. ii., 16), the best varieties of Malabathrum came from Kirrhadia—that is to say, Rangpur in Eastern Bengal. The description given in the Periplus of how the Malabathrum was prepared by the Thinaï (Chinese?), from leaves which were used by the Sesatai to wrap up the goods which they brought to market, is very curious, and must refer to some custom of an Assamese tribe, which is still probably capable of illustration and elucidation. All the indications of position point to the mountainous regions included in and surrounding Assam as the home of the Malabathrum, and there in fact the above-named tree abounds, extending westwards to the Sutlej, and sparingly to the Indus; and eastwards to Burma. It is also found in Queensland, Australia.

<sup>103</sup> Cf. Periplus of the Erythraean Sea, pp. 23, 25.

## 13. THE KARPION TREE (Καρπίον).

*Laurus* (Cinnamomum) Sp. (?) *Pandanus odoratissimus* (?)

Ktesias's description of this tree, according to Photios,<sup>104</sup> is as follows: "But again there are certain trees in India as tall as the cedar or the cypress, having leaves like those of the date palm, only somewhat broader, but having no shoots sprouting from the stems. They produce a flower like the male laurel, but no fruit. In the Indian language they are called *μυρωδα*, i. e. unguent roses. These trees are scarce. There oozes from them an oil which is wiped off from the stem with wool, from which it is afterwards wrung out and received into alabaster boxes of stone."

The nature of this tree has been much discussed. In some respects the description suits the *Pandanus*, the flowers of which yield, on distillation, a fragrant oil which is called *Keora* by the natives, and in these particulars, especially its palm-like habit, it corresponds least well with the characteristics of the cinnamon. Mr. M'Crindle's arguments in favour of its identification with the latter are of considerable cogency, though certainly not conclusive. He says: "I have little doubt that the Sanskrit *Karpura*, Camphor, is substantially the same as the Tamil-Malayalim *Karuppu* (oil of cinnamon), and Ktesias' *Καρπίον*, seeing that it does not seem to have any root in Sanskrit, and that camphor and cinnamon are nearly related. The camphor of commerce is obtained from a species of laurel (*Laurus camphora*, Nees.)," but this tree is not found in India, and it is believed that camphor itself was not known to the Greeks. Altogether it may be doubted whether a complete solution of the difficulty can be obtained. It is probable, however, that Ktesias jumbled together the characteristics of some species of *Laurus* with those of the screw pine (*Pandanus odoratissimus*).

## 14. CASSIA (Κασσία).

*Laurus cassia*,<sup>105</sup> Roxb., &c.

The term cassia appears to have been applied to different substances by the ancients, ten varieties are mentioned in the Periplus. They were produced chiefly from different species of *Cinnamomum*, but other plants wholly unallied to the laurel family may, it is thought by some authors, have contributed aromatic substances which were included in the same general denomination. As this subject has been dealt with by most commentators, more need not be said of it here.

<sup>104</sup> Ecloga in Photii, Bibl. lxxii. 28.<sup>105</sup> According to some authorities this is only a synonym for *L. tumala*.

15. INDICUM (Ἰνδικὸν μέλαν).

*Indigofera tinctoria*, Linn.—Indigo. *Nīlī*, Sansk. *Nīl*, Hin., &c.

Among the exports from the Skythic port of Barbarikon, on one of the mouths of the Indus, the above substance is enumerated in the Periplus, upon which Mr. M'Crindle<sup>106</sup> remarks:—"It appears pretty certain that the culture of the indigo plant and the preparation of the drug have been practised in India from a very remote epoch. It has been questioned, indeed, whether the Indicum mentioned by Pliny (xxxv. 6) was indigo, but, as it would seem, without any good reason. He states that it was brought from India, and that when diluted it produced an admirable mixture of blue and purple colours. The dye was introduced into Rome only a little before Pliny's time."

It is stated that as late as the close of the 16th century it was not known in Europe what plant produced indigo, although its preparation at Lisbon was described by Marco Polo. As is well known, it has hitherto been a most important product from British India, but the introduction of an artificial indigo renders it probable that the trade of the indigo planter is destined to become extinct ere long.

16. A TREE HAVING BEAN-LIKE PODS (Ἀένδρον λόπους ἔχον).

*Cassia fistula*, Linn. *Amultas*, Hin. *Suvarna*, Sansk.

According to Strabo,<sup>107</sup> Aristobulus mentions "a tree, not large, bearing great pods, like the bean, ten fingers in length, full of honey, and says that those who eat it do not easily escape with life."

The above description suggests the pods of the *Cassia fistula*, which are sometimes two feet long. They include, besides the seeds, a sweet mucilaginous pulp, which, however, is not poisonous, but is regarded as a valuable laxative, the seeds may be noxious. Possibly the pulp, if taken in quantity, might produce disagreeable effects.

17. NARDOS (Νάρδος).

*Nardostachys jatamansi*, Jones—Spikenard.

From the Periplus we learn that gangetic nard or spikenard was brought down the Ganges to Gange, near its mouth, and was forwarded thence to Mouziris and Nelkunda. Spikenard, which was obtained in the regions of the upper Indus and in Indo-Skythia, was forwarded through Ozene (Ujein) to Barugaza (Bharoch), and was thence exported to Egypt.

The true origin of this aromatic drug was first discovered by Sir W. Jones,<sup>108</sup> who was followed in its investigation by Roxburgh<sup>109</sup> and Royle.<sup>110</sup>

<sup>106</sup> The Erythraean Sea, p. 17.

<sup>107</sup> B xv., C 1, § 21.

<sup>108</sup> As. Res., ii. p. 405.

<sup>109</sup> As. Res., iv. p. 109.

<sup>110</sup> Illust., p. 243.

They determined it to be the root of a plant named as above, which belongs to the Valerian family.

It is obtained in the higher regions of the Himalayas, and is brought down for sale in considerable quantities, being much esteemed by the people of Oriental nations generally on account of its strong fragrance.

It is called *sambal* in Hindi, and *balchur* in Hindustani.

#### 18. THE PURPLE FLOWER (Ἄνθος πορφυρεῖν).

*Grislea tomentosa*, Roxb. The *Dhaura*, Hin.

Among Photios's extracts from Ktesias<sup>111</sup> there occurs the following passage:—"Near the source of the Hyparkhos there grows a certain purple flower, which is used for dyeing purple, and is not inferior to the Greek sort, but even imparts a more florid hue."

I am inclined to recognize in this description the flowers of the *Dhaura* tree (Sanskrit, *Dhatri pushpika*, or *Agnivala*, i. e. flame of fire), which was named *Grislea tomentosa* by Roxburgh.<sup>112</sup>

It will be seen by reference to any of the Indian *floras* that the flowers of this wild jungle-shrub are largely used as a dye. Thus Brandis says they are collected in the North-west, and exported to the Punjab for dyeing silks; and Drury, that "in Kandeish, where the plant grows abundantly, they form a considerable article of commerce inland as a dye."

I have often seen baskets-full of the dried flowers exposed for sale at the fairs in Chutia Nagpur, together with crude shell-lac, i. e. in the same general region as that in which the Hyparkhos river was probably situated. The petals being minute, it is the coloured sepals which actually afford the dye.

#### 19. OIL OF SESAME (Ἐλαιον σησάμινον).

*Sesamum indicum*, Linn. Gingely Oil, Eng. *Yelloo cheddie*, Tamil. *Til*, Beng.

This is one of the most valuable oil-yielding plants in India. Both seeds and oil are still largely exported from India, as they were, or at any rate the latter was, according to the Periplus,<sup>113</sup> from Barugaza (i. e. Bharoch), it having been brought there from the region in the Narbada valley, then known as *Ariake*.

It is much cultivated in India and Egypt, and has found its way even to the West Indies. The seed contains about forty-five per cent. of oil, which is, when carefully extracted, of a pale yellow colour. It has a sweet smell, and is one of the best substitutes for olive oil.

<sup>111</sup> Cf. *Ancient India*, by J. W. M'Crindle, p. 22.

<sup>112</sup> According to Brandis the proper name is *Woodfordia floribunda*, Salis.

<sup>113</sup> Cf. *Periplus of the Erythrean Sea*, by J. W. M'Crindle, p. 17.

20. *KOSTUS* (Κόστος).

*Aucklandia costus*, Falconer. Sansk., *Kushta*.

According to the author of the *Periplus*, *kostos* was exported from Barbarikon, at the mouth of the Indus, and from Barugaza, it having come from Kabul, through Proklais,<sup>114</sup> &c.

Much doubt existed as to the identity of this drug, till it was ascertained by Dr. Falconer to be the root of the above-named plant, which belongs to the order *Asteraceæ*. It inhabits the moist open slopes surrounding the valley of Kashmir, at an elevation of 8000 or 9000 feet above sea level.

The roots have a strong aromatic pungent odour, and are largely employed on account of their supposed aphrodisiac properties.

Considerable quantities, under the name *putchyk*, are still exported from Calcutta to China—or were some years ago; but it is possible the route from Lahore, whence they were brought to that port, has now been changed in favour of Bombay or Karachi. In China it is used in the manufacture of incense. Two varieties are distinguished by their colours and qualities.

21. MARINE TREES.

*Bruguiera gymnorhiza*, Lam.—Mangroves. *Kakra*, Beng.

According to a passage in Antigonus, we learn that Megasthenes, in his *Indika*, mentioned that trees grow in the Indian seas.

These were doubtless mangroves, which flourish in Sind, in the estuaries of the Indus, as well as on various parts of the coast of the peninsula, and the islands of the Bay of Bengal, spreading thence to the Northern parts of Australia. As is well known, mangroves grow below high-water mark, and, with their stems supported above ground by numerous roots, they present a singular appearance—one sure to attract the attention of European travellers in India.

Pliny's accounts of marine trees may possibly include the mangrove, but they are somewhat vague; they seem to refer rather to the appearances presented by different corals and algæ.

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<sup>114</sup> *Periplus of the Erythræan Sea*, by J. W. M'Crimdale, p. 20.



## NOTE ADDED IN THE PRESS.

While these pages are passing through the press my attention has been drawn by Prof. Haddon to an article in the October number of the *Edinburgh Review* on Aristotle's History of Animals. Aristotle's history has not been often quoted in this paper, for the simple reason that it contains little or nothing of importance about Indian animals which is at the same time original. The statement of Pliny and Athenæus, that Alexander sent Indian animals to Aristotle, has been rejected as being without foundation by Humboldt, Schneider, and Grote. With this opinion, which is endorsed by the writer of the review, I fully agree, on account of the absence of original remarks regarding them; but I must take exception to part of what he says about Ktesias, for although he objects to Aristotle's mention of him as a man "unworthy of credit" (οὐκ ὢν ἀξιόπιστος), and as a "manifest liar" (φανερός ἐψευσμένος), he himself says that the following, together with some of the races of men mentioned by Ktesias, are "simply creatures of the imagination," or "altogether fabulous." The animals so denominated are the *Skolex*, *Dikairon*, *Martikhora*,<sup>115</sup> and the Indian ass, the origin of the stories regarding each of which, and their respective identifications, I venture to believe I have successfully explained in the foregoing pages. His opinion as to the identity of the *Krokottas* agrees, I observe, with mine.

It has occurred to me that the *Leucrocotta* of Pliny (B. viii. ch. 30) was the Nilgai (*Portax pictus*). According to his description it was the size of the wild ass, with the legs of a stag, the neck, tail, and breast of a lion, the head of a badger, a cloven hoof, the mouth slit up as far as the ears, and one continuous bone instead of teeth. The last item I cannot explain; but the mane and tail of the Nilgai sufficiently resemble those of the lion to have suggested the comparison.

The *Hippelaphas* of Aristotle has also been supposed to be the Nilgai by some writers.

---

<sup>115</sup> Topsell's fantastic figure of the *Martikhora*, given in his "History of Four-footed Beasts," which is reproduced by Miss Phipson in her "Animal Lore of Shakespere," might easily be spoken of as a creature of the imagination.

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### POLITE LITERATURE AND ANTIQUITIES.

SER. II., VOL. II.]

JANUARY, 1886.

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L.—ON THE KENFIG INSCRIPTION. By SIR SAMUEL FERGUSON,  
LL.D., Q.C., President.

[Read, February 12, 1883.]

THE object of this Paper is to show probable grounds for believing that traces of the name MERLIN, as well as of certain Christian symbols, the antiquity of which has of late years been generally discredited, exist on the Ogham-inscribed stone at Kenfig in Glamorgan-shire.

The other Ogham inscriptions of Wales and South Britain are couched in the same form and dialect as those of Ireland. Early British and Irish Histories (*Nennius Hist. Brit.*, c. viii., lxvi., *Cormac Gloss.*, *Mug Eims*) allege an Irish settlement in South Wales and South Britain in and before the third century, as well as an expulsion of these settlers on the advent from Northern Britain of a conquering race, described as the sons of Cunedda, before the middle of the fifth. Those archaeologists, who regard these inscriptions as old British, conceive the language of both countries to have been the same until the revolution consequent on this invasion induced on the old British language its present Welsh characteristics, of which the most noticeable for the purposes of this Paper is the substitution of P for K or Q, as in *Map*, a son, for *Maq* or *Mao* in the other dialect. In either point of view—it is not necessary to discuss which is the better grounded—the ordinary Welsh Oghams are, *prima facie*, referable to a remote epoch, possibly not later than the sixth century.

The fable of Merlin, at least under his name of Ambrosius, is as old as the British Nennius (about A.D. 858), who makes him cotemporary with Vortigern and the coming of the Saxons; but he is not mentioned by his name Merlin in documents earlier than the twelfth century. The symbols referred to have hitherto been known only in Welsh bardic tracts of an age not going above the fifteenth. To carry back either the name or the symbols in question to Welsh Oghamic times would consequently corroborate Welsh pretensions to a high-age literature by a very authentic kind of evidence. There were two Merlins; one the British magician, ascribed to the fifth; the other the Caledonian prophet, to the sixth century. The earlier Merlin with whom we are here concerned was the “*infans sine patre*” of the tale in Nennius (c. xliii., xlv.), the “son of the Nun,” of mediæval romance. The Nun of Caermarthen is fabled to have borne him to a spirit, and throughout Welsh poetry and tradition he is known as *Map*, the son, or *an Map*, the illegitimate or misborn son of the Nun; in the Welsh language *an map* and *an hap lleian*. I do not pretend to penetrate the mysticism lying behind the popular ideas attaching to him; but if this be his name which, on the Kenfig stone, appears to answer to another proper name, in Latin, also inscribed upon it, it may reasonably be believed that under the puerile outlines of the fable something esoteric lies concealed.

Premising so much, and asking attention to this *matronymic* of Merlin, I proceed to give some account of the situation and history of the Kenfig Monument, and to indicate in detail what remains of the inscription. To reach the Kenfig Stone, descend at the Pyle station on the railway from Cardiff to Swansea, and pursue the road leading westward at first on the northern side of the railway, by Water-street, towards Margam. Some hundred yards beyond the last house of the scattered hamlet of Water-street, at somewhat over a mile and a half from the station, the stone will be observed erect on the south side of the highway. The "street" entering into the local name intimates that we are here on the line of the Roman road leading towards *Nidum* (Neath) of the Itinerary from the Silurian *Venta* (Caer Gwent) and the "trajectus" of the Severn; and may prepare us for observing without surprise that the stone bears on its face, towards the road, an inscription in Latin. This is the long-known legend, *PUMPEIUS CARANTORIUS*, incised in debased Roman characters, reading from above downwards. The *æ* in *Pumpeius* is of the Irish form, and the general aspect of the work, coupled with the position of the monument, point to an origin in the later post-Roman period.

So far as regards this part of the inscription, the stone was known to the editor of Gough's Camden:—

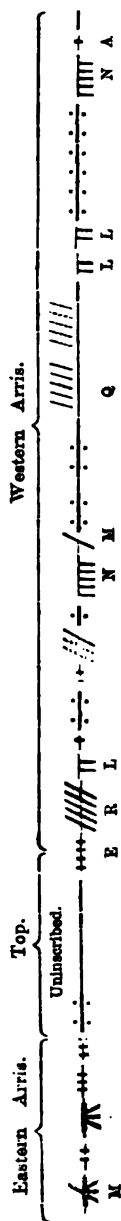
"Between Margam and Kinfeage by the road-side lies a stone near four feet long, with this inscription:—

Pump eius  
Caran topius.

This, as the Right Reverend the Bishop of Landaff informs me, the Welsh by altering read and explain thus:—*PIM BIS AN CAR ANTOPIUS*, q. d. *The fire fingers of our friends or neighbours slew us*, believing it to be the sepulchre of Morgan, the prince from whom the country took its name."—(Camd. Brit. 1789, vol. ii. p. 493.)

But it was not until 1846 that the existence of the associated Ogham was noticed. We owe this discovery to the acute eye of Professor Westwood, who here, for the first time—apprized of the nature of Oghamic writing by Petrie's Essay on our Irish Ecclesiastical Architecture—discovered the existence of such characters in Wales.

In 1873 Mr. Rhys, now Celtic Professor in the University of Oxford, gave the Kenfig Stone, amongst other Ogham-inscribed Welsh monuments, a careful inspection, and succeeded in making out the remains of what evidently is some form of the key-word *Magi*, which determines the course of the reading, and ascertains the positions wherein we should look for the principal name and for the patronymic. In other Ogham bilinguals of Wales each name in the Ogham characters is a literal or nearly literal echo of a corresponding name in the Roman ones. Expecting to find such a *replica* of the Latin in the associated Ogham here, Mr. Rhys conceived that certain triradial marks at the commencement of the legend, being in fact the symbols I have referred to, are representatives of the two *p*'s of *PUMPEIUS*, one



of them compounded with *m*, and that the reading of the earlier part of the legend, as the characters originally stood, probably was *Pompei*, or *Popei Carantoral*, the residue being *smeq. . . . ll. . . . n*.

In the autumn of 1874 I visited the Kenfig Stone, but not under favourable circumstances for observation, and failed at first to see what I now believe to be its full significance. I perceived, however, that the compound triradial character taken for *mp* stood at the head of the legend, and was followed, after some vowel points, by the uncompounded one, so that a literal echo of *POMPERUS* could not have been intended. It was also apparent that the vowel preceding the *x* comprised too many points for *Λ*, and was *ε* or *ι*, but apparently *ε*; that there was no trace of any vowel between *x* and *L*; and that what had been taken for *s* preceding *magi* included a fifth digit, which probably had been regarded as a natural indentation, but which struck me as sculptural, making *n*. Coupling the group *E R L* with the terminal *N*, I could not but be struck with these elements of the name *Merlin*; but the *E R L* were separated by a long lacuna which I could not then account for from the *N*, and my impressions, although highly stimulatory of the imagination, remained perplexed and obscure, so that I soon began to desire an opportunity of seeing the Monument again, and satisfying myself on various doubts excited by continuing reflection. Accordingly, on the 29th June, 1875, I again visited Pyle and made the paper cast of the inscription, which I now lay on the table. It has suffered a good deal by rubbing and carriage in the interval, but is sufficient to justify me in stating to the Academy that what remains of the inscription affords the sequences of ascertainable characters and letters indicated in dark lines in the subjoined diagram. The text begins on the eastern or left-hand arris, disappears altogether along the top, which appears never to have borne any inscription, and is continued down the western arris to the ground level. The eastern group consists of the two triradial characters resembling the broad arrow, separated and followed by vowel points now much abraded, but seemingly consisting of one group, between them, of two points, and another, following, of six distinguishable and (two?) abraded points. After these, and a lacuna extending the length of the top, come the letters *E R L*, and then a long abrasion, from which the characters have disappeared, all save obscure vowel points following *L*, apparently five in number, leading up to what may be the remains of three stem-crossing digits (*NG*), but of which the last one only



Applying our attention now to the principal name, we look in vain for any trace of the missing M immediately before the E R L; but, recalling the fact that the triradial groups with their string of vowels of the eastern arris are preceded by the compound character containing that letter, and that this is the initial character of the entire legend, we may be reminded of something similar which led me, so far back as 1870, to speculate on the probable existence in Ogham legends of what I ventured to designate as the "dispartition of proper names," on which analogy it might be allowable to accept the initial M of the opposite angle, whether compounded or distinct, as the desiderated initial of the name, which would thus assume the nearly complete form. MERL N.

We might accept the uninflected N before Maqi as the last character of the name. But the interspace is too long for a single *;*, and must have held at least twice as many points and digits. It might have held both the *;* and *ng* necessary to complete Merling, which would account for the uninflected N before Maqi. But if this last letter be not part of the name, some vowel must have preceded it to give it an independent articulate force. What must we assume this to be? The question receives a solution agreeable to the hypothesis which has conducted us so far, in the prefix *anmap*, as we have seen it above associated with the name of Merlin. This concludes the reasoning on which it is submitted, that if the entire inscription, omitting the interjected symbols, and their string of vowels, were spread before us, as it was originally sculptured, it would present this appearance:—

**Merlin m's [born] son of the Nun.**

I do not suggest that this was the sepulchral monument of Merlin, supposing such a person ever to have existed. Its position seems rather that of a termion pillar, looking to the neighbouring ecclesiastical precinct of Eglws Nynydd, distant about three hundred yards. The old buildings at Eglws Nynydd have been partly incorporated into a modern residence, but the antiquity of the site is evinced by a sculptured stone in the grounds, which bears the outlines of a Greek

cross, accompanied by ornamentation of a very primitive type, recalling the zig-zag and volutes of Dowth, together with the remains of a much-corroded inscription: *Hano cruce[m] fecimus VII. anmak . . . . (orate) . . (orate)*. Who were the *Septem anmaccs*, if I have rightly read the legend, or whether the name of the parent was masculine or feminine, time has made it impossible to guess; but the monument gives an entirely Christian and even mystical character to the place. Merlin, indeed, is the very impersonation of esoteric ideas, for parallels to which we might look to the *Bogomiles* of the fifth century and kindred sects in other countries. It is true, Welsh tradition treats him as a real person, and the author of the *Englynion y beddeu*, corresponding to the Irish *Laoi na leachi*, or Poem of the Graves, calls him Merlin Ambrosius, the Lion of Luaghor, the Son of the Nun (*anap lleian*), and records that his grave is in Newais Vynydd, which may, perhaps, indicate this very Nunydd:—

Bed an ap lleian ym Newais  
Vynydd lluagor lleu Emreis  
Priff ddawin Merdyn Emreis.  
(Myv. Arch. I. 77.)

And, if Eglys Nunidd were indeed the place meant—though I would rather imagine it to be called after the name of a person—these verses, at least as old as the time of William of Salisbury, in the fifteenth century, would be very apposite to this inquiry; but I am not qualified to determine a question of Welsh topography, and conclude that whether Merlin was a real or imaginary being, and whether this be or be not the once-reputed place of his burial, there are probable grounds for believing that his name and designation did, at one time, exist on this western arris of the Kenfig monument.

Let us now give our attention to that part of the Ogham text existing on the left-hand or eastern arris. The character resembling the civil “broad arrow” certainly corresponds to a well-known symbol in use among the Welsh Bardic writers. This symbol is alleged, by those who believe in the authenticity of Welsh Bardic tradition, to have stood for the name of God from primeval times, and to have been the original from which all alphabetical writing among them, especially the *Coslbren y beirdd*, or Bardic alphabet, proceeded. The critical school of Welsh writers denies to the *Coslbren* a proved existence earlier than the end of the sixteenth or beginning of the seventeenth century, and condemns the symbol from which it professed to originate to a similarly questionable origin. Mr. Pryse, editor of the 3rd edition of Dr. Owen Pughe’s Welsh Dictionary (Denbigh, 1866), has accurately summed up the conclusions of this school in what he says in his preface to that work, when speaking with some disparagement of Dr. Pughe’s belief in the authenticity of the Bardic writings:—“He was also a believer in the authority and adaptability of the Bardic alphabet to the Welsh language, although its existence has not been proved before the time of Llewelyn Sion, about 1600”

(Born 1580; and died, 1616. *Barddas*, I. lxxv.). On the other hand, the Welsh MSS. Society has followed the example of the author of the "*Hanes Cymru*," and have affixed the triradial group to their publications as a symbol of authentic significance; and, indeed, if we are not to regard the late Edward Williams (*Iolo Morganwg*), either as a forger or as the dupe of forgers of an earlier date, there cannot be a doubt that the symbol was regarded as a primary feature of the old Bardic system at a much earlier period than that of Llewelyn Sion. In the collections of Mr. Williams, published by the Society under the title of the *Iolo MSS.* (Llandovery, 1848, text, p. 45; translation, p. 424), there is a piece purporting to have been copied by Williams from a MS. of Llewelyn Sion, purporting again to have been copied from Meyrick Davydd's transcript of an old MS. in the library of Raglan Castle. The library of Raglan Castle was formed by William Earl of Pembroke, in 1590, and destroyed by fire in the time of Oliver Cromwell (Skene's "*Four Books*," vol. i., p. 2). We must, therefore, take the tract on its own representation, which, to a mind unsuspicious of fraud, and averse from the facile but ignominious method of reconciling literary difficulties by gratuitous suggestions of forgery, bears the impress of an origin in ideas that were current at a very much earlier period than it will be necessary for us to explore in this investigation. The tract is entitled, "*The Roll of Tradition and Chronology here*," evidently grounded on the doctrine of the *logos*, and commences by stating "*The announcement of the divine NAME is the first event traditionally preserved; and it occurred as follows: God, in vocalising His Name, said  $\pi$ , and with the word all worlds and animations sprang co-instantaneously to being and life from their non-existence, shouting in ecstasy of joy,  $\pi$ , and thus repeating the name of the Deity.*" It proceeds to state that this name is not to be divulged orally, and goes on to give an account of the first institutions of Society, of the Bardic Order, and of the early progresses of the Cymri, where it breaks off abruptly, leaving no internal evidence beyond that of style and orthography from which to determine the date of its composition.

We may now with advantage consider what further statements have been made respecting the method of symbolising the name of God, and whether anything else observable in the associated groups before us may be regarded as of significance in that connexion. I am now about to cite from another collection of further materials left by the late Edward Williams, published by the Welsh MSS. Society (Llandovery, 1862), and edited by the Rev. James Williams (*ab Ithel*), author of "*Ecclesiastical Antiquities of the Cymri*." It is entitled "*Barddas*," and is stated by the Editor to consist almost wholly of compositions of Llewelyn Sion, but the date or authorship will presently be seen to be of little moment. The principal tractate takes its commencement from the same primary group of three rays which we have been considering. It adds, however, a statement which cannot fail to excite a lively interest in connexion with the appearance of the vowel groups

associated with those symbols in the Oghamic text before us. The symbol, it will be observed, consists of three radii, the central one, as explained in these writings, corresponding to the perpendicular shaft of the sun's light at mid-day, and the oblique ones on either side corresponding to the slant rays of evening and morning ("Barddas," i. p. 21), "and," the tract proceeds, "it was on hearing the sound of the voice, which had in it the utterance of the three notes corresponding to the three rays, that he (*i.e.* a mythical impersonation of Adam) obtained the three letters, and knew the sign that was suitable to one and other of them. . . . And it was from the three primary letters that was constructed every other letter. . . . Thus was the voice that was heard placed on record in the symbol, and meaning attached to each of the three notes. The sense of O was given to the first column, the sense of I to the second or middle column, and the sense of V to the third; whence the word OIV" (*ib.* p. 18). This OIV, or OIU, as it is elsewhere written (*ibid.* 65), had, it is further stated, before the time of Taliesin, been written O. I. O., and was subsequently made O. I. W. (*ib.* p. 65, citing Simon Bradford, a bard of 1760-80), and its use in these various forms in the compositions of bards, from the fourteenth to the sixteenth century, inclusive (*ib.* pp. 20, 21, *u.*), appears to be a well-established fact, vouched by numerous quotations, of which one will suffice here as showing the Scriptural and Christian complexion of this part of the Bardic mythos. The line is from Davydd Nanmor, who died, A.D. 1460:—

O. I. ag W. yw ag Oen

He is O. I. and W. and a lamb.

At whatever period, therefore, the system was composed, it is evident that, for a long time, these expressions of the Divine Name by the triradial symbol and by this group of vowels have gone together in Bardic symbology; and we may now turn again to the consideration of the Oghamic text, with a reasonable certainty that if we find in it these vowels associated with the triradial symbols we have already examined, we may regard ourselves as on firm ground among memorials, if of a mysticism older, perhaps, than our impressions of Bardic pretensions may have prepared us for, yet of a mysticism having its origin at some time in the Christian period. And, in fact, traces of the vowel O do appear after the first triradial group, and of other vowel points after the second, which, if eight in number, would yield among other combinations the equivalents I. U. Subject, therefore, to the reserves which must be taken into account in dealing with indentations so weather-worn, and possibly mutilated, a concurrence of evidences seems to lead us towards the conclusion that these groups on the left arris are in fact the Bardic symbols and monogram of the Trinity.

Some pregnant reflections will probably, by this time, have arisen

in the minds of those who have given attention to recent examinations of the Welsh Bardic pretensions:—First, that if these be the symbols of the *Barddas*, they are here, for the first time, found on a monument of high antiquity; secondly, that they are here for the first time found engraved on stone; and, thirdly, as regards their vocalic elements, for the first time found so expressed in Ogham characters. For neither in the *Barddas*, nor elsewhere, as far as I know, is there any Welsh written record of a lapidary use (except on stone dice or lettered *tessera* arrangeable by the hand) of what is called their *Coelbren* or Bardic alphabet, or of this triradial symbol on which it professes to be founded.<sup>1</sup>

Supposing then that this Ogham inscription contains the name of *Merlin anmap lleian* coupled with the symbols and monogram of the Christian Trinity, it, at first sight, will appear to depart from the analogy of other monuments of its class, in not affording an echo in sound to the associated name PUMPIUS CARANTORIUS. This *titulus*, however, has more the appearance of a name of office than of a name of appellation. It seems to express a function and a mode of exercising it, and might be rendered "Five-wise Warrantor."<sup>2</sup> If the allusion be to the wounds of Our Lord, then it will not be inconceivable that some parallelism may be intended. Into this region of mysticism, however, it is not my intention to enter.

I wish a perfect cast in plaster could be procured of the Kenfig monument. Unless I have misled myself all along the line of research pursued in respect of everything on and about it, it affords proof of a continuing Oghamic usage in Wales after—probably long after—the sixth century; of a singular turn for sculptural mysticism; and of a high antiquity for expressions and symbols of such ideas amongst the Welsh, generally thought, at present, to be the creation of comparatively modern Bardic imposture.

<sup>1</sup> The principal objection to the *Coelbren* itself is, that it never has been used by the people, and it has only been since the discovery of three initials, engraved in that character on a mediæval bedstead in "the Court" at Merthyr Tydvil, that its impugnors have fully acquitted Edward Williams of being himself the fabricator of it (*Braddas*, 1, 164 n.) The allegation is, that when, after the revolt of Owen Glendower, in the fifteenth century, the means of obtaining paper and parchment were denied to the Welsh, and the bards, for the preservation of their literature, had to cast about for a substitute, they revived the use of this method of letter-cutting on wood, the memory of which had still been traditionally preserved among them. The tract on this subject contains an incidental observation which goes some length to show that the framers of the *Coelbren* had traditions in mediæval orthography derived from authentic, though probably forgotten, sources. I refer to what is said (*Barddas*, 1, 61, 81) of the fashion which once prevailed of duplicating and triplicating, and even quadruplicating characters—a feature of old writing which, I believe, remained unnoticed until the divulging of Oghamic texts containing like duplications in this country.

<sup>2</sup> CARANTARE. *Du Cange*.

## II.—ON THE CULEBATH. BY REV. THOMAS OLDEN, B. A.

[Read, April 13, 1885.]

IN Dean Reeves's *Adamnan* he discusses the nature of a sacred object which belonged to St. Columba, and is said to have been preserved at Kells in the eleventh century. It was known as the *culebath* or *cuille-faidh*. The word does not occur in any dictionary or glossary, and the Dean endeavours to arrive at its meaning by a collation of the passages in which it occurs. How far these afford material for a decision will appear from a brief review of them.

The first is from the Annals of Ulster, A. D. 1034, and is as follows:—

Macnia ua h-uchtain, lecturer, of Kells, was lost on his voyage from Scotland, and Columcille's *culebadh* and three of St. Patrick's reliques and thirty men with him.

Again, at A. D. 1128—

The successor of St. Patrick was openly outraged in his presence, for his retinue were plundered and some of them were killed, and a clerical student of his own people, who bore a *culebadh*, was slain there.

In the Annals of Tigernach, A. D. 1090—

The reliquaries of Columcille, viz. the Bell of the Kings and the *cuillebaigh*, came from Tirconnel with 120 oz. of silver, and Aongus O'Donnallain was the one who brought them from the North.

In the Book of Ballymote also the word occurs in connexion with St. Columba and St. Ceallach.

In none of these passages is there anything to throw light on the nature of the *culebath*; and I pass on to an extract from the preface to the Amra of Columcille, in which the saint is described as "covering his head that he might not see the men or women of Ireland." In this the word *culpait* occurs; but the introduction of this passage into the discussion appears to have been a mistake, as *culpait* is not the same word as *culebath*, and it has been translated "collar" by Mr. Hennessy, in the Life of St. Columba, from the Leabhar Breac.

There remains only one passage more, from the legend known as the "Sea Wanderings of Snedgus and MacRigail."

"And the bird gave a leaf of the leaves of that tree to the clerics, and it was as large as the hide of a great ox; and told the clerics to take it with them and place it on the altar of Columcille. And that is the *cuillefaidh* of Columcille at this day, and it is at Kells that it is."

This is the only passage which yields any information; and as we learn nothing more from it than that the *culebath* might be likened to the leaf of a tree, it does not help very much.

Four years later appeared O'Curry's "Lectures on the Manuscript Materials of Irish History." He goes over the same ground, but omit-

ting the passage from the *Amra*, and adding the following stanza, attributed to St. Evin:—

My pure quatnor (Gospels) is strong,  
For law and for sanctuary;  
We bestow, they are good for your valour,  
My *clar* and my *cuilcjadh*.

His conclusion is that it is an unknown object.

Such was the state of the question until the publication of the Glosses on the *Soliloquia* of St. Augustine by Professor Windisch in the "Irische Texte," brought out jointly by Dr. Stokes and himself, and published in Berlin last year. In these glosses I found the word *habellum* glossed *culebath*. Windisch's note on this, gloss No. 86, is merely "I have never met the word except in this place." But it is clearly the word which gave so much trouble to the distinguished editor of *Adamnan*, and thus it appears that this sacred relic, reputed to have been St. Columba's, and to have been in existence A. D. 1090, was a liturgical Fan.

In Cardinal Bonas's work on the Liturgy, quoted in Bingham's *Antiquities of the Christian Church*, we find the following passage:—

"They have, in conclusion, fans with which two deacons standing at either side of the altar drive away flies and other unclean insects which fly past, so that they may not touch the sacred things. The Greeks call them the 'holy *παρῖδια*', that is 'Holy Fans'. The use of these in the Greek Church is extremely ancient, and is expressly mentioned in the Apostolic Constitutions (lib. viii., cap. 12), in the Liturgies of Basil and Chrysostom, and in others of the Eastern Church. They have a rather long handle, to the end of which is attached the face of a cherub surrounded by six wings. By moving this the deacons fan the sacred gifts at certain times directed in the Liturgy."

Such a practice was obviously convenient under the burning Eastern sun, and in lands teeming with insect life, but from the East it passed to the Western Church, where, being certainly out of place, it gradually declined, and finally ceased about the fourteenth century.

Fans are mentioned as existing in many places on the Continent and in England, but according to Mr. Warren<sup>1</sup> they are not mentioned in Irish literature, though represented in the illuminations of the Book of Kells. This statement I have now shown to be a mistake, but it is worthy of notice that they are only referred to in connexion with our earliest ecclesiastics. These are St. Patrick, if O'Curry is right in describing that at Armagh as his, St. Columba, St. Evin, and St. Ceallach, all of whom flourished before the close of the sixth century.<sup>2</sup> From this we may infer that the usage ceased very early in Ireland, where it must soon have been found quite unnecessary.

<sup>1</sup> *History and Ritual of the Celtic Church*.

<sup>2</sup> St. Columba, b. 321. St. Evin, d. 504. St. Ceallach, b. 543.

But though adopted in the West, it is not mentioned in any Western Ritual, and never occupied the same position as in the East. There it is known to this day as the "Holy Fan"; the manner of its use is prescribed; the time appointed, and the ecclesiastics by whom it is to be waved; and in the ordination of deacons it holds a prominent place.

In that ceremony one of the rubrics runs as follows:—

"After the Amen he puts the stole on the newly ordained over the left shoulder, saying 'worthy', and 'worthy' is repeated thrice, according to custom, by those in the *Bema*, and thrice by the singers. Then the bishop gives him the Holy Fan, saying as before, 'worthy', and all the deacons give him the kiss. And he, taking the Fan, stands corner-wise at the holy table at the right side, and fans above the blessed sacrament."

The material of which the fans were made was originally of the simplest kind. In the Apostolic Constitutions referred to by Cardinal Bona they are said to be of "thin membrane, or peacock's feathers, or fine cloth." This was in the third or fourth century, but in after-times they were made in a more costly fashion, being generally of silver, as those represented in the illuminations of the Book of Kells appear to have been, and if those paintings are coeval with St. Columba, they no doubt represent that actually used by him.

Cardinal Bona describes one form of fan, but there were many others, such as those depicted in the Book of Kells, which were of a circular form with an ornament attached, apparently a tassel. This is the kind said to be used by the Maronites at the present day.

The term by which they are known in the Greek liturgy is *πίπιδια*, as already mentioned. In the West they were indifferently named *fabellum*, *flabrum*, *ventilabrum*, *muscatorium*, *muscifugium*. The Irish term is variously spelt, the earliest form being *culebath*, which is that of the *Soliloquia*, the glosses in which are ascribed by Windisch to the ninth century. It appears to be a vernacular term compounded of *cuil*, pl. *cúili*, "a fly" (Lat. *culex*, "a midge," "a gnat"); and *badh*, "suppression or destruction"; and it approaches nearest in meaning to the *muscifugium* above mentioned.

Similar compounds are *dunebadh*, "man-destruction"; *bobhadh*, "cow-destruction".<sup>4</sup>

<sup>3</sup> Little Dale, *Offices of the Holy Eastern Church*.

<sup>4</sup> The following are the different forms of the word:—

|                        |                            |
|------------------------|----------------------------|
| <i>culebath</i> ,      | in the <i>Soliloquia</i> . |
| <i>cule badh</i> ,     |                            |
| <i>chúile-badh</i> ,   | } Annals of Ulster.        |
| <i>cúile bad</i> ,     | St. Evin.                  |
| <i>cúili-bad</i> ,     | Book of Ballymote.         |
| <i>chúille-baigh</i> , | Tigernach.                 |
| <i>cúilefaidh</i> ,    | Snedgus and MacRigail.     |

I have adopted the form *culebath* as the earliest, but the last of the forms here given represents the pronunciation accurately enough.



It is an interesting example of an ecclesiastical term which is not a loan-word.

The loss of its meaning in Ireland illustrates a remark of Professor Zimmer that, on the cessation of the Danish invasions and the revival of learning, the knowledge of old Irish had to a great extent died out.

It is strange to find such scholars as the Four Masters entirely unacquainted with the word. In one passage of their work taken from the *Annals of Ulster*, A. D. 1034, they divide it into two words, *cu lebadh*, translated "with the bed" (*i.e.* of St. Columba) by Dr. O'Donovan, who was not aware of the mistake.

The recovery of its long-forgotten meaning is an instance of the value of those glosses which have been so fortunately preserved abroad, and in the present case of those on the *Soliloquia* in particular, for which, as for many other services to Irish literature, we have to thank Professor Windisch.

#### NOTE ADDED IN THE PRESS.

"My *clar* and my *cuilefadh*."

Mr. O'Curry, in quoting the stanza from the poem of St. Evin, leaves the word *clar* untranslated. It means a board or table; and the article which St. Evin here leaves, together with his copy of the Gospels and his Fan, seems to have been one of the portable altars made of wood, which were in use, especially by missionaries, until the close of the eighth century.

The earliest existing example is that which was found in the cathedral of Durham, with the bones of St. Cuthbert, who died A. D. 687, and which doubtless belonged to him. It is now preserved in the Chapter Library. The material of which it is composed is wood, covered with very thin silver; its size being 6 in. by 5½. A similar portable altar was found on the breast of St. Acca, bishop of Hexham (who died A. D. 740), when his bones were exhumed more than 300 years ago. It was composed of two pieces of wood, joined by silver nails.

The word is, therefore, another instance of a vernacular ecclesiastical term.

LII.—DESCRIPTION OF A SERIES OF PLAYING CARDS RELATING TO THE POLITICAL HISTORY OF REV. DR. SACHEVERELL IN THE REIGN OF QUEEN ANNE, BY WILLIAM FRAZER, F.R.C.S.I., M.R.I.A.

[Read, December 8, 1884.]

THE literature of that remarkable period in our English history extending from 1709 to 1711, the year 1710 being its central point of interest, abounded in political excitement. Pamphlets from opposite sides of the question were published absolutely in hundreds, and eagerly read. Party strife reached its boiling point and convulsed the kingdom. The question of Ministerial power and responsibility, of Royal influence, of the rights of the English people, of the ultimate chances of succession to the throne of a Stuart or Hanoverian Prince, the long-continued and close intimacy between Queen Anne and the Duchess of Marlborough, now coming to an unexpected disruption, the prosperous tide of warlike successes of the great Duke of Marlborough himself, when he had succeeded in humbling the troops of Louis XIV. by successive defeats, suddenly arrested, and his honesty even brought into question—all these matters were made subjects of fierce contention, and of alternate blame or praise by party zeal.

The supporters of Dr. Sacheverell appealed to the non-juring clergy, to the still existing sentiments of cavalier loyalty in the gentry and nobles, and to the thorough-paced advocates of Regal Rights, who still formed a large section of the community; whilst the successors of the old Cromwellian party, those who detested the politics and court life of Charles II. and his unfortunate brother James II., and who had succeeded in bringing about the Revolution under William and Mary, were equally resolute in their efforts to uphold the Bill of Rights, and the principles of limited constitutional government. In the words of Defoe, so eminently characteristic of his style and mode of thought, we find him saying, "I have nothing to say to the man; I owe him neither good or ill; let him be punished or escape punishment. It is the temper of insulting the laws and preaching up tyranny—'tis this I oppose, and this I will oppose."

No less than seventeen portraits of Dr. Sacheverell are described in Noble's *Biographical History*: there were medals also struck to commemorate the strife, and caricatures in large number testify still further to the interest taken in the burning questions of 1710.

On consulting the *Catalogue of Satirical Prints and Drawings* in the British Museum, from 1689 to 1733, vol. ii., No. 1546, we read the following statement:—

"This sheet consists of twenty-six engraved subjects, illustrative of the career of Sacheverell; they were prepared for a pack of cards, and belong to the suits of diamonds and hearts: the *clubs* and *spades* are not known. A few of the subjects refer to general affairs un-

connected with Sacheverell. Each card has a couplet engraved under the design as below."

Reference to the British Museum Catalogue will supply a full description of the series of red cards, hearts and diamonds, which are preserved in that great national collection. By chance, through the kindness of a friend, the missing black cards belonging to the spades and clubs, which were up to this time totally unknown, have fallen into my possession, and we are able, with their aid, to complete the literary and political history of Dr. Sacheverell, so far as they were recorded in this interesting pack of cards, each of which will be briefly described in a manner similar to those already catalogued in the British Museum. The cards were designed and published immediately about the period when the Doctor managed to set England in a blaze of excitement, and was at the height of his popularity as a High Church champion.

#### DESCRIPTION OF THE SUIT OF SPADES.

*Acc.*—The mace and purse are carried off from the Lord Chancellor, who is seated:—

"See him Surrender up the Purse and Mace,  
That Harcourt may supply Lord Coop—'s place."

Sir Simon Harcourt was one of Sacheverell's council when he was impeached.

*Two.*—Queen Anne on a throne, an angel represented drawing aside a curtain held by the Duchess of Marlborough; Harley walking towards the throne:—

"An angel makes the Curtain open wide,  
And shews y<sup>e</sup> Queen that truth w<sup>ch</sup> one would hide."

*Three.*—Queen Anne giving a key to Earl Powlett, Harley, afterwards Earl of Oxford, and others, as Commissioners, on dismissal of Lord Godolphin, the High Treasurer, August 8, 1710:—

"Into his worthy Hands she gives the Key,  
By which her Mistress breathes an Air that's free."

*Four.*—Sacheverell robed at the bar of the House of Lords, his accusers urging their statements to the Chancellor and Peers:—

"Stern Managers against his Doctrines rail,  
And in them Anna's sacred Rights assail."

*Five.*—A Judge pronouncing sentence on the several persons outside the Bar:—

"The Baron may excel the wise Recorder,  
But killing Horses never will be Murder."

*Six.*—Sacheverell walking down through House of Lords, away from the empty woolsack, the Lords grouped on either side. On May

23rd, 1710, Sacheverell was prohibited by the House of Lords from preaching for three years, and his sermon ordered to be burned by the hangman :—

“Jaw may affix a Padlock to his Tongue,  
But Innocence will have a Voice that’s strong.”

*Seven.*—The Chancellor seated, giving sheets of paper to a messenger. In the back ground is a man holding the mace :—

“Here, Ja — b, take the Tryall to the Press,  
After it has put on a proper Dress.”

*Eight.*—The doctor speaking at the Bar of the House of Lords :—

“The D — r at the House of P — rs attends,  
To answer Articles which the Com — s sends.”

*Nine.*—A Judge seated, speaking to a number of persons who are evidently enraged :—

“Sentence upon Offenders may be pass’d,  
Yet Monarchs Pardon those whom Juries cast.”

*Ten.*—Militia captain with halbert, followed by two armed soldiers, one of whom is drinking from a pewter pot which the other holds for him. People huzzaing and running :—

“Goodly and great Militia Captain Strides,  
And with y<sup>e</sup> Champion’s mien, y<sup>e</sup> Coward hides.”

*King.*—A number of persons with account books on hands. Marlborough, after the battle of Malplaquet, returned to England, and was accused of misapplying the public money in the winter of 1710 :—

“When books are look’d in, t’will appear at last  
What they deserve that leave Accounts unpass’d.”

*Queen.*—The Duchess of Marlborough represented holding a dish for Queen Anne to wash her hands, and throwing the water in Mrs. Masham’s face :—

“Kept from insulting a too bounteous Queen,  
She on the faithful Mas — m sheds her spleen.”

*Knave.*—An old printing press in operation. Sir Samuel Garrard, the lord mayor, refused to support the assertion of Dr. Sacheverell, that he had sanctioned the printing of the sermon delivered in St. Paul’s, November 5th, 1709, wherein he declared that “the Church was in danger :—”

“He that commands a Sermon to the Press  
Ought to stand by the Preacher in Distress.”

## DESCRIPTION OF THE SUIT OF CLUBS.

*Acc.*—Dr. Hoadley is represented preaching in a tub, with Mitre in one hand, and the Westminster Confession of Faith in the other, on his head a conical cap. Dr. Hoadley, then Rector of St. Peter's-le-Poer, in London, was represented in several caricatures of the time with Presbyterian books at his side :—

“The Mytre in one hand, and league in t'other,  
Show that the Tubster is a fickle Brother.”

*Two.*—Waterman with badge on his breast, and bailiff on his knees, attacked by foot soldiers :—

“The Waterman and Bailiff on their Knees,  
Implore their Mercy that upon them seize.”

*Three.*—Workmen engaged in erecting a scaffolding :—

“Sculpture by this the Workmen's Toil displays,  
That for the Tryall did the Scaffold raise.”

*Four.*—A Puritan Meeting-house destroyed by lightning, persons fainting and flying, and one supported by a figure with ass's ears :—

“No wonder that they'r Thunder-struck and Swoon,  
When Barns, that give them Sustenance, are down.”

*Five.*—Devil and Puritans at a table, crown and mitre on the ground; a monk is giving absolution, and a lizard-like demon is whispering into the ear of a seated figure like Hudibras :—

“The dark Caball would bring us to Confusion,  
While the Shorn Monk pronounces Absolution.”

*Six.*—Persons unlading wooden boards from a cart: behind is a church :—

“Materials for a Scaffold may be bought,  
Yet he that is Impeach'd be void of Fault.”

*Seven.*—Newsboys running with papers :—

“A speech that Shows such Injurys and Wrongs  
Calls for Redress with more than Hawkers' Tongues.”

*Eight.*—The doctor is conducted to prison :—

“His Body with Imprisonment is Charg'd,  
But Souls like his in Prison are enlarg'd.”

*Nine.*—Pulpit and clock burning, men dancing; in allusion to the destruction of the Nonconformist Meeting-house of Dr. Burgess in Carey-street, Lincoln's Inn :—

“The Clock and Pulpit in the Flames expire.  
That help'd Non-con. to set the World on Fire.”

*Ten.*—Bonfire, with men rejoicing around it :—

“The D——r is preserved from being Roasted,  
For which his Health around y<sup>e</sup> Flames is toasted.”

*King.*—Mob pulling down a Meeting-house pulpit, clock, &c. Dr. Burgess’s chapel in Carey street, Lincoln’s Inn Fields, was destroyed by the mob, March 1st, 1710, during Sacheverell’s trial :—

“Well were Sedition’s Shop in Ruines laid,  
Could we but make the Faction quit y<sup>e</sup> Trade.”

*Queen.*—Men attacked by horse soldiers :—

“When Crouds of Rebels dare assault y<sup>e</sup> Crown,  
’Tis just that Loyal Guards should Cleave them down.”

*Knave.*—Men attempting to pull down a church, Hoadley tries to prize open the door ; he is seated before it in canonicals, his crutches on the ground. From above an angel is shooting his arrows down :—

“H——d——ly may Sap and his Associates pull,  
But Angels interfere and over rule.”

LIII.—DESCRIPTION OF A “SHALE CHARK” OBTAINED IN THE CITY OF DUBLIN FROM THE BED OF THE PODDLE RIVER IN 1882, WITH OBSERVATIONS. By WILLIAM FRAZER, F.R.C.S.I., Member of Council, Royal Irish Academy.

[Read, February 15, 1885.]

IN commencing my description of this early specimen of earthenware, it might be desirable to explain what is meant by calling it a “Shale Chark;” the phrase has become obsolete from long disuse, but in the sixteenth century it was applied to an article then well understood, and in ordinary domestic demand in household economy. Thus we find it employed in an “Inventory of the Household Effects of Lord Deputy Lord Leonard Gray, taken in the year 1540,” immediately after his being recalled to England, and previous to his execution, by beheading, on Tower Hill, on the 28th June, 1541. The catalogue of his possession was made by the express direction of Henry VIII. and through the chief Officers of State, and is preserved in the Irish State Papers, but is accessible from the published account that appears in the *Ulster Journal of Archaeology*: see vol. vii. p. 201. The writer of this communication in the pages of the *Ulster Journal* offers us, in a footnote, the following explanation, or, as he terms it, “a guess at what these ‘shale charks’ were.” “Shale in the olden time signified earthenware, and the verb ‘to chark’ meant to expose new ale in shallow vessels to the action of the atmosphere, so that it might acquire acidity, and be the sooner fit for drinking.” As to the former word, “shale”, I am not quite satisfied that it means “earthenware”, and prefer the explanation given by Stephen Skinner in his *Etymologicon Linguae Anglicanae*, A.D. 1671. He considers “shale” equivalent to “shell”, and explains it by the synonym *siliqua*, and in a secondary sense *patera*—in fact it simply means a flat dish. As to the word “chark”, he says it is a common Lincolnshire word, where they constantly practise the exposure of fresh beer to the air in an open vessel, until it gradually acquires some degree of acidity, becoming clearer, and more speedily potable; and he refers the word itself to an Anglo-Saxon origin. The necessity for such an exposure becomes more intelligible when we recollect that malt liquids were formerly made without the addition of hops, and that the sweet decoction of malted barley would require to be ripened or acidified by exposure to the air to render it a palatable and potable liquor.

This flat earthen dish now exhibited seems to me to correspond in every respect with the description of vessel that was formerly employed for “charking” malt liquids. It was obtained by a workman who was employed in clearing out the bed of the Poddle river where it passes through Ship- (the ancient Sheep) street, which, covered over like a common sewer, runs to join the Liffey by passing through the grounds of the Old Castle of Dublin, and close to the spot where its muddy waters flow beneath the Castle gates, and also near the place where the Round Tower formerly stood, of which the sole surviving record is a sketch made by Gabriel Beranger.

The perfect state of preservation of this early specimen of earthenware is worth observing. We can seldom obtain articles of this description fabricated in the fifteenth and sixteenth centuries in our city; a few broken fragments are unearthed from time to time when the soil is disturbed, but with the exception of tiles used for ecclesiastical buildings, of which some were found when repairing our cathedrals—St. Patrick's and Christ Church—and the "greybeard", which in former times was employed to hold wine or brandy; and even these are far from common: any complete and perfect specimen of the earthen vessels which were in daily use by our Dublin citizens during the reigns of Henry VIII. and of Elizabeth are of exceptional occurrence; yet this dish affords us a good illustration of an early art manufacture that must have supplied large quantities of the common wares in ordinary demand for the need of every large household, and possibly for the daily requirement of our humbler classes of citizens.

The material employed in fabricating this dish of earthenware was a fine description of plastic clay, similar to that which was made use of for preparing the better class of ornamental tiles. Such a clay, when subjected to a strong and continued heat, baked into a firm and sonorous mass; and it affords us ample proof of the skill and high degree of perfection attained in its manufacture, when we consider its present almost perfect condition after so many years of exposure to running water in a common city sewer, for it still retains its hardness, and is in as good order as when it left its maker's kiln. Its shape is much like that of an ordinary dish without the outer flat edge; it is longer than broad, measuring  $17\frac{1}{2}$  inches in length, by  $15\frac{1}{2}$  inches wide, and is about  $2\frac{1}{2}$  inches deep; the angles are rounded, and the outer edge indented by a simple impressed pattern; the earthen, pale brown-coloured clay of which it consists is about three-eighths of an inch in thickness; it is glazed on the interior only, and this glaze, which is very perfect, was put on over a rude but effective series of brown-coloured lines running somewhat parallel to each other from top to bottom of the dish, and which, by their varying thickness, and somewhat curved arrangement, form a rather pleasing appearance.

In this interesting example of early potter's work, which I would refer to about the sixteenth century, we have an opportunity of seeing a description of dish so seldom met with, that I am not aware of another specimen having been found in our city. It has survived through many years under conditions which we might consider in a special degree most unfavourable, lying exposed in a subterranean stream that is liable to sudden and violent floods, and which has served the purpose of a common sewer to some of the oldest portions of our metropolis. If, besides this alleged antiquity and exceptional survivorship, we identify it with the special form of vessel employed from very early times to "chark" or render drinkable the malted ale which our ancestors drank before hops were in use, or public breweries established, its claims to our notice will not be diminished.



LIV.—ON A LONDON MS. OF CICERO'S LETTERS. BY LOUIS C. PURSER,  
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[Read, June 8, 1885.]

PART I.

IN the notes of the Preface to the volume of Baiter and Kayser's edition of *Cicero*, which contains the *Epp. ad Familiares*, reference is made to two Harleian mss. of that work, which Oehler, even as far back as 1839, saw to be independent of the Medicean (M), the acknowledged foundation of the criticism of these letters. The grounds for his opinion, however, do not appear to have been very cogently set forth; at least they failed to convince Baiter. Subsequently Fr. Rühl, in the *Rheinisches Museum*, vol. xxx. (1875), called attention again to these mss., and showed reason why we should consider them not to have been copied from M. But Rühl's paper was very short, a mere excerpt from a letter he wrote to Ritschl. It accordingly occurred to me last year that it would not be inadvisable to collate these mss. of the epistles, and examine them as carefully as my time allowed. This I did; and the results of the examination of the volume which contains the last eight books of the *Epp. ad Fam.*, I am now venturing to lay before the Academy.

The ms. is No. 2682 of the Harleian collection, a fine folio in single columns, written on rough parchment. The lines are ruled *à la pointe sèche*. As well as I could judge from undoubted specimens of thirteenth century writing, this ms. belongs to that age; and such is the opinion also of Rühl. The writing is very good and regular, the diphthongs *æ* and *œ* are almost always expressed by plain *e*, the letters *c* and *t* are constantly confused, the words are frequently separated by little strokes inclining towards the left, there are dots over double *i*, the punctuation is very careless—all marks of thirteenth century copying (see Chassant, *Paléographie des Chartes*, p. 96). The ms. consists of 192 folia and 25 quaternions. There are 32 lines on a page, and about 82 letters in a line. The handwriting varies on fol. 13, returning to the original hand at fol. 14. It varies to yet a third hand at fol. 32, which continues to fol. 56. Return is then made to the first hand; and in it the rest of the ms. is transcribed. There are few corrections by a second hand in any of the treatises, except the Philippics.

On fol. 1a, at the top, we find an entry of the date on which it came into Harley's possession, viz., 20 die mensis Octobris, A. D. 1725. [It was on the same day that he got 2725 (Graevius' well-

known ms. of Horace), 2773 (the ms., called *Graevii primus*, of the first eight books of the *Epp. ad Fam.*), 4933, 5377, 5378 (correspondence and notes of Graevius). See Streicher, *Comm. Philologae Jenenses*, III. 212.] After that comes the following table of contents:—

In hoc libro continentur diuersae epistolae Tullii Ciceronis  
 Hic Tullius de amicitia et de senectute  
 Inuectiua Tullii in Sallustium et Sallustii in Ciceronem  
 In Catilinam tres libri inuectiuarum Tullii  
 Paradoxa Stoicorum . liber pro Marco Marcello  
 liber pro quinto ligario  
 Philiphica Tullii . liber officii.  
 Alexander in fine.

As a matter of fact, the works comprised in the volume are:—

- Fol. 1b. *Epp. ad Familiares*, IX.—XVI.  
 52a. Epistola ad Octavianum.  
 53a. De Petitione Consulatus.  
 57a. De Amicitia.  
 64b. De Senectute.  
 71a. Philippics.  
 113a. Cicero in Sallustium.  
 114a. Sallustius in Ciceronem.  
 115a. Orationes (four) against Catiline.  
 125b. Paradoxa Stoicorum.  
 129a. Pro Marcello.  
 131a. Pro Ligario.  
 134a. Pro rege Deiotaro (to *astate* § 26. 1216.26 Orelli).  
 135b. Fulgentius Planciades de abstrusis Sermonibus.  
 137b. Pro Marcello.  
 140a. Pro Ligario.  
 142b. Pro rege Deiotaro.  
 146a. Pro Milone.  
 153b. De imperio Cn. Pompeii.  
 159a. Erf. ms. fragment about Milo's case (see Orelli II. p. 1152).  
 Verrine III. to § 10 *deprecati*.  
 160b. Erf. ms. excerpts of Verrine IV.  
 164b. De Officiis I.  
 177b. De Officiis II. (to *intellegentias*, § 34. 693. 12, Orelli).  
 180a. Letter of Alexander the Great to Aristotle, generally called *De Situ Indiae*.  
 185a. Julii Valerii Epitome.

The appearance in this Harleian ms. (which I shall call H for the future) of the fragment which is added before the oration for Milo in the Erfurdt ms., viz., that beginning "P. Clodius senator seditiosus fuit" (see Orelli, p. 1152), together with the fact that we find the very same fragments of the Verrines, viz. III. §§ 1-10 to *deprecati*; and in Verr. IV., those fragments and no others which appear in Erf., lead us at once to the surmise that in these works of Cicero, which are found both in H and Erf., we shall discover a considerable similarity. And though the similarity is not as great as I had at first expected to find, still there are several of the treatises in H which owe their origin to the same archetype as the Erf. ms.<sup>1</sup> Now, there is another ms., containing various works of Cicero, which belongs to the same family as Erf. does. It was owned by the German theologian Melchior Hittorp; and we have a good deal of information concerning it preserved in the commentaries and *Variae Lectiones* of Graevius, from which source Wunder and Orelli derive their not unfrequent references to this ms. It has just those passages of the third and fourth Verrines that Erf. [and H] have. "Melchioris Hittorpii schedae . . . excerpta sunt codicis Erfurtensis" (Orelli, p. 235, *Introd.* to Verr. III.). Whether or not it came into Graevius's possession I cannot say. But, at any rate, it was a Cologne ms.—whether or not identical with the *Coloniensis Basilicanus* is doubtful (see Orelli's *Introd.* to *De Imper. Cn. Pompeii*, p. 516)—and much used by him along with another ms. of that city, which is generally called *Coloniensis Graevii*.

Before, however, coming to the *Epistolae ad Familiares*, it may be of some service to take a hasty glance at the other works in the ms., as we shall thereby, perhaps, see more clearly to what class this copy of the Epistles is to be referred.

The *Epistola ad Octavianum* has a striking resemblance to Erf., and is no doubt copied from the same archetype. I went through all the variants in Wunder (pp. 137-139), and found H agreeing with Erf. in every case except the following:—780. 15,<sup>2</sup> uidere ms. non poterat H, non poterat uidere E.; 780. 22, pro H, proh E.; 781. 13, lapidabat H, lapidabat E.; 782. 18, utinam H, ut E.; 782. 31, pl. R. H, R. p. E.; 783. 5, audiet H, audiant E. H is sometimes corrected by a second hand: *e. g.*, 781. 5, dolere H<sup>1</sup>, dolore H<sup>1</sup>; 782. 3, praedicabant H<sup>2</sup>, praedicabam H<sup>1</sup>; 782. 5, celerem H<sup>2</sup>, scelерem H.<sup>1</sup>

The same agreement may be observed in the *De Petitione Consu-*

<sup>1</sup> For a full account and collation of the Erfurdt ms., see *Variae Lectiones librorum aliquot M. T. Ciceronis ex codice Erfurtensi enotatae* ab Eduardo Wundero, Leipzig, 1827.

<sup>2</sup> The references are to the pages and lines of Orelli's Cicero, edited by Baiter.

*latus*. We find H at one with Erf. in the following:—359. 2, intellegentia; 7, naturarum; 19, omnibus; 360. 9, atque (*for* quod); 23, caupadoes (H *has above the line* uel caupones; 29, r (*for* equites Romani); 32, optimusque caucilium; 361. 10, curiose tan-nios; 362. 8, ab honoribus; 15, petitionem magistratus; 31, consul; 363. 4, c. fundanique galii chociuui (Erf. *has* chorciuui); 364. 5, inter nos calumniatores; 29, hominem quam iners; 365. 27, autem emi quod; 31, obediendo; 366. 17, adspectatorem; 367. 31, facete abs; 368. 1, equandum dato; 369. 34, y (*for* Romani). The differences are slight, and such as would be made by two different copyists of the same archetype. H is rather more correct than Erf., which latter Wunder thinks of no very great importance in this treatise; *e. g.* H has: 359. 7, descendenti; 19, fere; 360. 10, illis; 15, homini; 362. 34, prorsus; 363. 4, deferundis; 6, est *inserted*; 17, homines *inserted*; 364. 1, hominum; 9, comparantur; 365. 28, adhibebitur; 36, salutatorum; 366. 26, honestatem; 367. 13, melius; 33, diurni nocturnique; 369. 21, ornando; 28, poscit.

The Erf. ms. contains the *De Amicitia* and the *De Senectute*; but I have been unable to find such resemblance as would lead us to attribute the copies in H to the same archetype. As regards the *De Amicitia*, I compared the first fifty variants (of Ernesti's edition from Erf.), as given by Wunder, and found twenty-seven agreements of H and Erf. In all these cases, except two (*viz.* § 1, augur scenola; § 9, nec catoni comparantur, the two mss. preserve what is really the more correct reading, erroneously altered by Ernesti; and in the remaining twenty-three, H has the correct reading, which has been corrupted by Erf. It has nec sicut . . . sapientem (§ 7), which is omitted by Erf., and, also, et uere (tuere, Erf.) in § 8. Of the first fifty important variants of the *De Senectute*, H agrees with Erf. in twenty-seven. Of these it agrees five times wrongly, *viz.*, § 1, flaminium, attice; § 2, leuare, certe scio (see Mr. Reid's note *ad loc.*); § 8, ignobilis. Out of the twenty-three times H disagrees with Erf., it does so only twice wrongly: § 5, ferendum; § 6, ingrediendum. H has all the words in the first ten sections, which Wunder notices as omitted by Erf. In § 3, it has attribuito *corrected into* attribuitur, and, in § 10, a mixture of two readings, *viz.*, cum etate condita grauitas cum etate condita uirtus grauis. H is on the whole wonderfully well copied. There is very considerable similarity between H and what Graevius calls his *primus*; but they are not the same, nor, I think, of the same family; for though several examples of agreement may be adduced, especially in the first ten sections or so, still, in the latter part of the treatise, such variants as 600. 26 (Orelli), occatum (occaecat Gr.); 33, oblectamentumque (oblectamenta Gr.); 608. 25, inclusi (conclusi Gr.); 609. 23, creditote (credite Gr.), 610. 4, colitote (colite Gr.); 23, stultissimus ini-quissimo (stultissimus aequo, Gr.), must be considered of great

weight.<sup>3</sup> In fact, the only conclusion I can arrive at, touching these two treatises as they appear in H, is that they are *not* connected with Erf. nor Graev. prim.; and that it does not appear to what family they belong.<sup>4</sup>

It is quite different as regards the *Philippics*. Here we can be very definite, for in H we have not only one of the same family as the *Coloniensis*, but the very book itself. In Col. the first two Philippics are pretty accurately copied, though we find such strange corruptions as 1243. 6, *exhaimunt* (*for* *exhauriunt*); 1271. 5, *Capouna* (*for* *Capua*), corruptions which H also exhibits. But from the third on, as may be seen from Graevius's *Variae Lectiones*, Col. becomes extraordinarily corrupt, there being ever so many erasures and corrections. Take, for example, such a passage as the following: 1295. 14. Here Graevius says—"In *Coloniensi* quidem habetur editorum lectio sed haec uerba *se similem esse Kathilinae* (sic ibi scribitur) *gloriar* sunt erasis uerbis a prima manu scriptis supposita recentiore a manu." Now, this exactly describes the reading of H. Again, at 1346. 15, Graevius says:—"Alii fuit etiam in *Coloniensi* sed erasae sunt litterae *lii* relicto *a'* nota illa litterae *a* apposita est a recentiore manu, ab illa quoque additum est *a' diss.* Ante interpolatorem in illo legebatur *quamquam qui unquam alii lud* *lactiores fuerunt cum in singulis uersibus.* *Quam* etiam est additum ab interpolatore." Here, again, H. answers entirely to this description. In short, I have gone through all the passages, such as the above (and they are many), where Graevius has noticed any sort of tampering with the original text of Col., and in all of them I have found in H exactly those alterations and corrections that he has referred to. Both Col. and H have the three large lacunae belonging to the D family (see Orelli's *Introd.* to the *Philippics*), viz. 1268. 2-1269. 10; 1306. 3-1318. 6; 1346. 16-1347. 7. Further they agree with the D family in beginning the fourth Philippic at 1286. 6. On these grounds, I am quite convinced that the copy of the *Philippics* in H is the *Coloniensis* Graevius referred to, though I feel bound to add that H has 1250. 6, *tot praetorios . . . iuuentutis*, which Graevius says are not found in Col. Graevius did vast work in his day, but was not exempt from error occasionally; and I think he made some mistake here.

<sup>3</sup> Graevius alludes to Hittentorpius (*sic*) at 589. 15, as having *contempler*. So has H. This, however, does not amount to much, though I presume Graev. refers to the Hittorpius. But we have no definite tradition of this *ms.* in these two treatises.

<sup>4</sup> The codex Gudianus, No. 335, agrees in some points with H, and might be supposed to be connected, as without doubt the speech for Deiotarus, where it occurs first in H, belongs to the same family as the Gudianus. But the points of difference are too great.

The spurious *Declamatio Sallustii in Ciceronem*, as it is given in H, agrees to some extent with ATB, as quoted by Orelli; and the *Declamatio Ciceronis in Sallustium* does so to a still greater extent. Both are very accurately copied. H. reads fuerint in 1425. 15. Neither of these treatises occur in Col. Erf. or Hittorp.

The *Orations against Catiline* are, if not the very book itself, at any rate in very close connexion with the ms. which Graevius calls his *secundus*. Take, for example, 663. 1. Graevius tells us that his *secundus* reads *publico consilio* "sed eadem manus adscripserat superius *psetho*." This accurately describes the reading of H. Again, 674. 15, Gr. sec. reads (agreeing with H), re quidem ne uobis omnibus etiam tum probata; 683. 22, senatu equitibus Romanis urbe aerario; 684. 14, mihi et urbis sine uestro et sine ullo tumultu satis praesidii consultum ac provisum est; 687. 14, in rempublicam destructos retrorsimus (where H has even the short mark over the o); 703. 16, praesentis furore non mouear (*above which in both Gr. sec. and H is written praesentis dolore non mouear*); 715. 10, coadiuuat (*for quoad uiuet*). On the whole I have looked through about one hundred and twenty of the references to Graev. sec. and found at least one hundred and five agreeing absolutely with H. As to the other fifteen, I am not quite sure that they are real exceptions, e.g. 683. 19, Gr. sec. is said to read *respondebunt tumulus sylvestribus*, omitting *Catilinae* after *respondebunt*. H has *Catilinae*. But I think Graevius was insisting only that his *secundus* read *tumulus*, not *tumulis*, and did not want it to be understood that it omitted *Catilinae*. So 684. 7, I do not believe Graevius intended that his *secundus* omitted *cum iniquitate* (H does not); for though he ignores it in the *Variae Lect.*, he reads it in the text. The most important differences of H from Gr. sec. are: 665. 22, uerebere (*uerebare Gr.*); 666. 13, adseruarem (*seruarem Gr.*); 673. 4, euasit erupit (*erupit euasit Gr.*); 678. 3, Quirites (*om. H, ins. Gr.*); 4 quod (*quos Gr.*); 696. 8, ad supplicandos (*ad supplicandos deos Gr.*); 704. 8, ne manent deplorandum P. R. (*ne maneat P. R. nomen Gr.*); 706. 7, formido (*fortitudo Gr.*). It will be easily seen by any reader of Graevius's *Variae Lectiones* that such variants are trivial compared with all the other instances of agreement. That these two mss. are identical is, to my mind, all but certain.

The *Paradoxa stoicorum* follow, but from what origin they are derived I cannot say. The tradition of mss. in Graevius's notes and *Variae Lectiones* is very scanty, and what there is wanting in definiteness. There is considerable agreement with one of Gulielmius's mss., but not sufficient to let us assume connexion. At 750. 25, H reads, Ego vero te non stultum ut sepe non improbum sed dementem iudico. Si quid in rebus ad uictum necessariis esse inuictum potest, &c. At 753. 27, the reading is as in the other mss. mentioned by Orelli.

The speech for *Marcellus*, where it occurs first, belongs to the same family as the Medicean. It would be tedious and inapposite to give the proof in detail. I cannot at all discover to what family to refer the second copy of the speech. That it is in neither case connected

with Erf. has seemed to me, after considerable examination, almost certain.

Nor can I trace connexion between the speech for *Ligarius* in either place and Erf. or Col. Graevii. Though we find striking similarities (*e.g.* 1202. 25), H (in second place) and Col. read *ne in RS* for *ne iners*, yet the divergences are very numerous and important. In each case the speech is copied in H with considerable accuracy; but to what family it is to be referred is a question I have been unable to answer.

As also in the case of the speech for *King Deiotarus*, at least where it occurs the second time and in full. The first time it occurs it only goes down to § 26, aetate 1216. 26. That is just where the Gudianus, No. 335, stops. There is considerable agreement in the readings of that ms. with H, and little divergence; so that one may fairly, in my opinion, refer both to the same family. But again I am baffled as to where to refer the speech the second time it occurs. Suffice to say it does not agree to any great extent with either Erf. or Col.

*Fulgentius Planciades* "De abstrusis sermonibus" comes in oddly amongst all the Ciceronian works. It is inaccurately copied. It has *quid sit* before each gloss all through. It has no list at the beginning, and is addressed to Chalcidius. It, however, differs considerably from the Brussels ms., No. 9172 (for which see the treatise by Dr. Laurenz Lersch on Fulgentius: Bonn, 1844); but this is not the place to discuss the comparative worthlessness of H.

On the speech for *Milo* we find in Orelli allusions (unfortunately only eight) to the Hittorpianus. They are: 1154. 16, ab improbis; 1155. 4, diuina; 1172. 10, probari; 1173. 11, uides; 1171. 1, libente; 1182. 2, ea; 1183. 31, et fortissimum; 1183. 31, elegit. In all these H has the same reading. (True, in 1155. 4, Orelli says Hittorp. reads *diuinae*, but Graev. declares that it has *diuina*). This makes a *prima facie* probability of the connexion of the two mss.

Somewhat different is the case with the speech *De Imperio Cn. Pompeii*. Here I have noted some forty-one references in Orelli to the Hittorpianus; and H. agrees in all except five, viz.: 520. 28, prope (propter *Hitt.*); 521. 28, prope (propter *Hitt.*); 523. 27, ut hac uos (ut uos *Hitt.*); 531. 18, quibus erat molestum (quibus erat semper molestum *Hitt.*); 538. 21, iterum nunc (nunc iterum *Hitt.*). Still when against these we put such important agreements as 523. 18, studio atque odio; 525. 15, partim; 17, illud, *omitted*; 525. 20, quale; 529. 17, quae; 530. 26, repentina; 532. 24, commendamus; 534. 29, gereretur; 32, cuiusquam iniquitas; 537. 12, facultatem; 538. 22, re-ficiendi, together with twenty-four other such agreements, we have very strong proof that, as regards this speech, H and Hittorp. are connected.

The fragment that serves as introduction to the speech for Milo in Erf., viz. that beginning P. Clodius senator seditiosus fuit (cf. Orelli, 1152), follows. It is to be noticed that it is thus out of place. It ought to have preceded the speech for Milo.

The Erf. fragments of the third and fourth *Verrines* follow, and

from these, what Gruter calls the *schedae* of Melchior Hittorp., were taken. These fragments are very accurately written, and superior to the copy of Erf., e.g. the words omitted in Erf. at 347. 25, 26, mittit etiam . . . mittitur; 365. 10–12, dies ille . . . contio are found inserted in H. It has, however, often been altered by a second hand to the reading of Erf.

The *De Officiis*, Book I. and Book II., down to § 34, intellegentia (693. 12), are accurately enough copied; but it is hard to say to what family they are to be referred. There are a very great number of agreements with Erf.; but the variants, though few, are of such a character<sup>4</sup> that one cannot be quite certain that the two mss. are from the same archetype. There is a curious transposition in H. It goes straight on to 649. 17, commutatur, and then, though on the same page, continues at 662. 33, periculosa et callida, down to 683. 27, gradatim; after which follows the previously omitted portion (649. 17–662. 33), after the completion of which it continues 683. 27 to the end. No such transposition appears in Erf., which only goes down to 672. 20, sive bonitate naturae sive.

The *Letter of Alexander* to Aristotle is that sometimes printed at the end of the editions of Quintus Curtius, entitled Alexandri Magni Epistola de situ Indiae et itinerum in ea uastitate ad Aristotelem praeceptorem suum in Latinitatem uersa a Cornelio Nepote. In H the only heading is Incipit Epistola Magni Alexandri Macedonis ad Aristotilem magistrum suum. I believe there is a critical edition of this epistle by Kluge, but I have not seen it.

The text in H of *Julius Valerius's* translation of the Romance of Pseudo-Callisthenes on Alexander the Great is singularly accurate. It is in close accord with the Wolfenbüttel ms., which Zacher<sup>5</sup> calls E, and values so highly, but at times preserves a more correct reading, and hardly ever disagrees with E. when the latter is right. I doubt if there exists a more accurate copy than the one in H. Julius Valerius is often found in mss. along with the Epistola Alexandri. (See Zacher's Preface; also Teuffel, Rom. Lit., 388. 11.)

We have thus found a considerable number of the treatises in the Harleian volume connected with the Hittorpianus, Erfurdt, or some one of Graevius's mss. This is to be remembered when we attempt further on to show a close connexion between the copies of the *Epp. ad Fam.* in H and in the Hittorp.—a ms. of the Epistles which, together with the Palatinus Sextus, we are told<sup>7</sup> is derived from the same archetype as the Erfurdt. But let us now say a few words about the copy of the *Epistolae ad Familiares* as given by H.

<sup>4</sup> 642. 7, quoad te (quousque Erf.); 653. 8, temperans (intemperans Erf.); 645. 5, gerendam (agendam Erf.); 670. 5, mancia (manciati Erf.).

<sup>5</sup> Julii Valerii Epitome, zum erstenmal herausgegeben von Julius Zacher: Halle, 1867.

<sup>7</sup> Erfurtensis autem, et Palatinus sextus et Hittorpianus, quos ex eodem cum Erfurtense fonte fluxisse iudico, &c. (Wunder, "Variae Lectiones," p. xciv.).



The *Epistolae ad Familiares*, ix-xvi., are all complete with the exception of ix. 18, though the index refers to this letter. There are indices to all the books except x., xi. It is unfortunate that there is no index to xi., as we should wish to know whether it would have referred to the mysterious letter xi. 13*a*, about the unhappy inhabitants of Parma. There is no appearance of that letter in the ms. The letters of xii., from 22 to the end, are all run together as in M. xii. 29 and xii. 21 are found a second time after xiii. 77; also a letter to Caelius (ix. 14), after xiii. 49. In xv., epistles 9, 7, 8 come in this order as in M. In xvi., the order is the same as in M. Fol. 20*b* (where the third quaternion ends) has 22 lines blank, but no break in the text. Fol. 30*b* (where the fourth quaternion ends) was blank, and has been filled up by a set of ingenious and somewhat laughable verses in double columns, *De sum et non sum, de sum et fui, &c.*

The copy of H is, on the whole, pretty accurate—far more so than the ms of the first eight books, Harl. 2773. But we find nearly all the common kinds of errors which copyists fall into—confusion of *i* and *l*, *ioci* for *loci*; *o* and *t*, even *patificatio* (183. 25); *d* and *t*, *at* and *ad*; *u* and *n*; *cl* and *d*, *demens* for *olemens* (225. 32); *ui* for *ut* (220. 22); such mistakes as *cito* for *scito*, *sceleriter* for *celeriter*.

As regards *spelling*, it is seldom consistent. Between *m* and *n* in certain words it generally inserts *p*, e. g. *calumpnia*, *contempnere*. The compounds of *iacere* are always, e. g., *abicere*, *obicere*. We find *cottidie* (but once *cotidianas* 225. 33), never *quotidis*, generally *intellego*, *neglego*, *optinere*, *existumo*, *affrica*, *amicicia*, *actenus* (though often corrected by first hand to *hactenus*), *paulo*. We find always *quicquid*, *expectatio*, *incolomitas*, *beniuolentia*, *libenter*, *recuperare*, *magnopere*, *repperire*, *eufraten*; but considerable variation as regards *iocundus* and *iucundus*, *optimus* and *optumus*, and all such superlatives. Almost always H has *hi*, *his*, *hiadem* for *is*. &c. It generally has *-is* in the acc. plu. of words with genit. plu. in *-ium*. On the whole, it does not show an inclination to assimilation; and this is especially the case with compounds of *ad-*, though find we *allaturus* (180. 31) *appetandum* (132. 19) *ammirations* (195. 11). Generally it writes *inquit*, and sometimes even such forms as *reliquid* (for *reliquit*). There is much variation as to the use of the longer or shorter forms of such words as *auocauerit* or *auocarit*: the longer forms are the more frequent. We find *Ant.* used for all cases, singular and plural, of *Antonius*. It does not run *est* into the preceding words, as M so often does, e. g. 165. 29, ratio*st* M, ratio *est* H. We sometimes find letters below the line, e. g. *am ntis* (= *amantis*). Greek words are sometimes, but very rarely, written in Roman characters. The Greek characters used by the scribe (who was ignorant of Greek) are just like those of the Erf. ms. Dittographia is comparatively rarely found; the corruption *ex homoeoteleuto* pretty frequently. The punctuation is decidedly inaccurate, and cannot be relied on at all:—e. g. 146. 1, *est de coctio*. *Mihi*, &c. 146. 8, *sequatur consilii*

nostri. Nisi, &c. 149. 9, gloria. Neque, &c. 150. 9, risurum. Scribam, &c. 151. 17, uenire non possum. Ego non, &c. And so on throughout the book. It sometimes has notes of interrogation, though often very inaccurately placed. The divisions of words are frequently quite worthless, *e.g.* 159. 13, est uocatus · de situsis dictator, *for* est uocari desitus, &c.

The *omissions* are, on the whole, few. Not mentioning single words where they are, as generally, small ones, the omissions that are of any importance are the following :—(They are in most cases due to *corruptio ex homeoteleuto*. When this is the case, I have added the word that caused the omission. The words enclosed in brackets are the ones omitted :)—154. 32, 33, periculo [aliquo . . . argumento]; 157, the whole of ix. 18<sup>a</sup>; 167. 31, sis [es autem adeptus amplissimos]; 180. 12, facultatibus [quas habemus]; 181. 8, Africanus [exercitus]; 185. 1, [equitatus et]; 186. 22–4 [quod . . . contrarium fuit]; 187. 17, [fecerat]; 40, retinuissem [si uno loco habuissem]; 189. 12, [reliquisse]; 192. 33, [a consule]; 195. 5, [legionem]; 198. 28, quod neque [Planci . . . arbitrantur neque]; 210. 6, referent [sive non referent]; 210. 30, [reliquiarum nihil fuisset]; 210. 35, [legatis nihil]; 218. 30, Romanis [omnibus]; 225. 6, hoc est [animi hoc est]; 227. 15, [Quod . . . rogo]; 229. 30, [lictiores]; 231. 12, [homo minime]; 232. 24, [civibus]; 234. 20, honestissimi [mihique coniunctissimi]; 235. 4, nec [honorum nec]; 244. 26, litteras [pondus habituras]; 245. 15, Aemil[i Aviani]ani; 250. 2–5, [Cicero Acilio . . . interfui]; 250, 21–23, [eum expedias . . . gratum erit]; 265. 27, [et . . . fiet]; 266. 19, consequemur [sin eadem . . . proicies]; 266. 30, [D. a. d. . . . Thessalonica]; 272. 23, tuto posse [per Dolabellam . . . posse]; 273. 25, ipse [opinio]; 281. 12, in habendis [aut non habendis]; 283. 41–2, publice [propterea . . . publice]; 287. 16, [et uictores . . . uellent]; 290. 9, putet [scis . . . putet]; 292. 17, [nihil . . . ualere].

There are a few examples of what look like variants, both of which have crept into the text, *e.g.* :—256. 1, officiis uel beneficiis; 258. 9, beneficiis uel officiis; 286. 22, gloria uel uictoria. There is one example of an explanation given of a Greek word: 299. 30, <sup>i regula</sup> kanon.

We have already made allusion to the close connexion of the Erfurdt, Palatinus Sextus, and Hittorpianus mss., which all belong to one family, as Wunder has told us (Var. Lect. xciv.) Now we have discovered considerable agreement with this family in several of the works which make up the Harleian volume; so that we are not at

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\* Probably omitted *ex homeoteleuto*. The copyist, after writing the heading Cicero S. D. L. Papirio Peto, went on at the next letter, which has exactly the same heading.

all surprised to find the *Epp. ad Fam.* exhibiting a very striking resemblance to the mss. of this family, and especially to the Hittorpianus. It being found along with other treatises belonging to the same family adds a sort of external confirmation to a theory that can be very strongly supported from internal evidence. That internal evidence I now proceed to set forth; and, in passing, let me remind readers of the high critical value of the mss. of this family, especially the Pal. Sext. and Hittorp.—laudatissimus codex Pal. Sext. (Gebhard ap. Graev. p. 71); Hittorpianus codex ut ex prior optimus (ib. 355, cp. 161).

And first let us take the *Hittorpianus*, That the Harleian ms. of the Epistles stands in the very closest relation to the Hittorpianus may be seen from the following points of agreement, which are among the most important:—146. 30, ostentatui; 147. 2, otiosissimi minabantur; 149. 3, praecipue cum iam inclinata sit uictoria; 152. 10, uiuentem (*for* iuuerem); 154. 41, esset incitata libertas; 161. 14 certiozem ut sis. Ceparius. 165. 28, quid sentires prudenter te arbitrar; 167. 8, sine uirtute fieri non potuisset; 167. 31, [es autem adeptus amplissimos];<sup>9</sup> 172. 39, fucata; 173. 24, [dicuntur]; 177. 19, [certe]; 178. 18, sinam ut exercitum; 179. 26, pater et frater (*for* pateret iter); 181. 35, tueor (*for* iuero); 182. 12, sin autem satisfactum officio reip. satisfactum putas; 183. 15, producimus; 192. 4, non scripsissemus; 192. 33, [a consule]; 198. 7, Hirtium perisse nesciebam Aquilam perisse nesciebam, Caesari; 198. 13, itinera fecit multo; 199. 17, hi noui terrores; 205. 15, communi miseriarum metu; 205. 35, quam me scio a te aeque contra iniquos; 210. 10, parenti<sup>heremus</sup> optimo merito; 215. 26, dum seruis haberemus;<sup>10</sup> 216. 16, Sexulius Rufus; 218. 30, [omnibus]; 221. 41, ab indocto (*omitting* non); 223. 11, πάντα περὶ πάντων; 225. 19, ea tibi commendo sed non debeo commendare; 228. 13, quibus eum tibi uerbis commendauerim; 231. 18, ὑμνηματισμόν; 236. 11, ordine ipso et hominum genere; 239. 8, hic ille est maxime; 242. 1, omnia a te summo studio et cura peto; 245. 13, ut uidetis in formulis; 247. 20, possum dicere eum non praefuisse; 250. 9, quod Demetrio graueretur; 262. 11, quod si Romae fuisset te uidissem; 264. 11, aditu ad tuam cognitionem patefacto; 266. 4, essemus, praestitissem; 266. 41, uirtutem et indulgentiam; 268. 1, O me perditum efflictum (efflictum *Hitt.*); 273. 18, nos tota die; 273. 25 [opinione]; 274. 22, abi amplico (*for* ab Iamblichio); 276. 18, dixissem et tamen adolescentem essem cohortatus; 276. 27, [audacter]; 281. 12, [aut non habendis]; 284. 16, cui nunquam concessisti; 287. 9, diffiniri; 288. 30, sed petunt statim ut ueniunt; 296. 33, ordinatus; 298. 32, nullo modo (*for* nihilo); 301. 1, exoptatissimus; 301. 9, quae quod pollicetur iste; 301. 18, praestabo gratias me scito; 302. 24, qua primo (*for* quadrimo); 303. 18 [Hirtium].

<sup>9</sup> The square brackets signify that the words are *omitted* in both mss.

<sup>10</sup> Graevius' note is: "*Hittorp.* dum seruis haberemus (*supra* haberemus scriptum erat heremus)." This exactly expresses what we find in H.

These are important points of agreement; but are not nearly all. However, I shall give *all* the passages in which H and Hittorp. *disagree*, seventy-two in number; and any reader of Graevius will then, by the Method of Residues, understand the very extensive nature of agreement of the two MSS.

## HARL.

## HITTORP.

|         |  |   |
|---------|--|---|
| 145. 41 | Hoc etiam κατὰ Χρύσιππον δυνατόν<br>est.   | Ноч κατὰ Χρύσιππον δυνατόν<br>etiam.                              |
| 148. 40 | S. V. G. V.  | si uales gaudeo ualeo.  |
| 166. 22 | neque facultas.  | neque sic facultas.   |
| 167. 41 | Haec si et (>) ages.   | Haec si ages.   |
| 169. 2  | opus fuerunt.  | opus fuit.  |
| 170. 30 | cuius rei non preterit tempus.   | cuius rei modo praeterit tempus.                                  |
| 172. 15 | ut consueuerat at ego et (>) litteras<br>tuas nihil enim sciebat.                      | ut consueuerat: at ego ei litteras<br>tuas nihildum enim sciebat. |
| 181. 27 | a tanta gloria.  | tanta gloria.   |
| 187. 4  | XVI.   | XV.   |
| 187. 24 | Fabium quendam.  | ob Fabium quendam.  |
| 189. 9  | a quinta legione concisam.   | a quinta concisam.  |
| 194. 35 | adhibuisset.   | adiuisti.   |
| 194. 42 | quo etiam et res illa.   | quo etiam res illa.   |
| 196. 5  | Martiam quartam quae.  | Martiam legionem quae.  |
| 196. 17 | initiat ciuitas.   | initiat uacuitas.   |
| 197. 27 | sua.   | tua.  |
| 198. 38 | uestra.  | nostra.   |
| 204. 37 | mihi amicus te.  | te mihi amicus.   |
| 205. 34 | ea si tu non audis.  | et tu si non audis.   |
| 206. 7  | nec te alienius.   | omitted in Hittorp.   |
| 207. 19 | frequenter repperient uentitare  | frequentius uentitare repperies.                                  |
| 209. 16 | libertate et temp. recuperare.   | libertatem recuperare.  |
| 214. 1  | consistet.   | existet.  |
| 214. 14 | ut optimo maximoque animo.   | ut optima spe maximoque animo.                                    |
| 216. 19 | celeriter iter expediri nobis.   | celeriter nobis expediri.   |
| 216. 38 | scripsi quam reuera furere inueni.<br>Quod uero aliquid de his scripsi<br>mirari noli. | scripsi mirari noli.  |
| 218. 37 | in Lycia esse.   | esse in Lycia.  |
| 223. 33 | arbitrabor.  | arbitrabar.   |
| 226. 28 | quibuscunque rebus potero.   | quibuscunque potero rebus.  |
| 229. 20 | tu sis.  | tu eius sis.  |
| 230. 17 | suorum.  | sociorum.   |
| 232. 13 | prudentialae.  | providentialae.   |
| 234. 42 | quasi simili causa.  | qua simili causa.   |
| 235. 1  | conplures.   | compluria.  |
| 239. 27 | commendationi.   | commendationis.   |
| 242. 10 | uiderere.  | uidere.   |
| 242. 19 | scripsisse de sese.  | scripsisse de se.   |
| 242. 24 | et in omni.  | et omni.  |
| 243. 18 | Cossinio.  | Cospinio.   |
| 244. 7  | in maiorem modum.  | maiorem in modum.   |
| 246. 30 | his.   | is.   |
| 247. 19 | negotii.   | negotium.   |
| 249. 28 | maximo sibi et adiumento et orna-<br>mento fuisse.                                     | apud te et adiumento et.  |
| 254. 24 | Genucilio curudiano pridem.  | L Genacio Sal iampridem.  |

## HARL.

## HITTORP.

|         |  |   |
|---------|--|---|
| 260. 39 | est ille quidem libertus.                              | est ille libertus.  |
| 265. 15 | mecum cupit esse.                                      | mecum cupit esse secum.   |
| 266. 27 | quando ita uobis placet.                               | qm̄ uobis ita placet.   |
| 268. 19 | id uelim sit eiusmodi.                                 | id uelim ut sit eiusmodi.                                       |
| 268. 27 | Philotherum.   | Philotaerum.  |
| 269. 19 | Suis S. D.   | M. Cicero S. D. Suis.   |
| 272. 35 | VIII Kal. Formis.                                      | <i>omitted in Hittorp.</i>                                      |
| 275. 14 | imbecilla.   | imbella.  |
| 276. 8  | salus.   | salus ipsius.   |
| 281. 42 | M. Cato S. D. Ciceroni Imp.                            | M. Cato C. Imp. S. D.   |
| 282. 9  | potius.  | <i>omitted in Hittorp.</i>                                      |
| 282. 16 | sis.   | sim.  |
| 284. 31 | ego unus debeam.                                       | ego debeam.   |
| 287. 37 | nulla.   | ulla.   |
| 288. 30 | portam.  | portas.   |
| 288. 33 | reuertatur.  | reuertuntur.  |
| 288. 38 | refraxisset.   | refruxeret.   |
| 292. 13 | moraris.   | morareris.  |
| 297. 17 | uniuersae et senatus et reip.                          | uniuersae reip. et senatus.                                     |
| 297. 32 | sed. <sup>ms</sup>                                     | se.   |
| 298. 1  | habet a tergo.   | habemus a tergo.  |
| 298. 1  | obrimi.  | obruī.  |
| 298. 2  | modo urbe salua.                                       | <i>omitted by Hittorp.</i>                                      |
| 299. 36 | satis scite.   | satis scire.  |
| 299. 39 | tu te mecum esse mi tu cumulatissime satisfacere puto. | tum et mecum esse tum et mihi cumulatissime satisfacere putato. |
| 301. 32 | illi.  | illis.  |
| 302. 17 | caue ne suspiceris.                                    | caue ut suspiceris.   |
| 303. 3  | et N. ad cuius rutam puleio.                           | et ad cuius rutam puleio.                                       |

Such are *all* the real cases in which Hittorp. varies from H; and though they seem numerous, they are really very few and trifling compared with the vast number of agreements. There are a few other cases where there appears to be a variance between the mss., but these are, in my opinion, due to mistakes on the part of Graevius. And it may not be irrelevant here to say that we must not place too implicit faith on what Graevius says is the reading of this or that ms. He generally wishes to lay stress on some word or words, and disregards making the rest of his quotation exactly conform to what he finds in the ms. he is quoting from. Take, for example, 271, 9. In his Var. Lect., p. 337, we find within four lines the same passage of Hittorp. quoted as 'sed *si* metuendus' and 'sed metuendus.' At 235, 28, in the Var. Lect., p. 321, Graevius gives *acceperit*, as what Hittorp. reads; but in the notes under the text *accepit*. At 228, 13, Var. Lect., p. 317, *commendarim* is said to be the reading of Hittorp.; in notes under the text *commendaui*. Such inconsistencies do not weaken one whit our admiration for Graevius's wide and profound learning; but it shows that we are not necessarily to consider that in the following passages Hittorp. reads exactly as Graevius states, and so is at variance with H, especially as in each case the point of divergence is not the matter that

Graevius is evidently wishing to emphasize; 146. 25, Ostiae uideri eum commodius exire posse, *Hittorp.* Ostiae uideri commodius eum exire posse, *H.* The point Graevius wishes to emphasize is that *Hittorp.* reads *ostiae*, not *optime*, and may have neglected to state correctly the order of *commodius* and *eum*. 172. 1, ut magnam mihi partem laetitiae tua dignitas, afferat, *Hitt.* Ut magnam partem mihi laetitiae tua dignitas adferat, *H.* Here that *Hitt.* has *afferat*, not *affert*, is the point insisted on, not the position of *mihi* and *partem*. Similar errors I have noticed (I give the reading of *H* in each case) at 163. 26, quid ad te hercule coena numquid ad te; 185. 5, repente Antonius in aciem; 188. 41, et ego mehercules longe remotus; 196. 30, septem numerum nunc; 197. 7, a te mi litterae redditae sunt; 228. 18, quod tuum est iudicium de omnibus; 235. 28, praedia in estimatione accepit; 238. 21, meus autem est quam familiarissimus; 239. 7, hic ille est; 240. 41, esse eos M. Curii; 266. 27, aliquid ad me uos scribitis; 281. 10, etiam illud mihi animum advertisse uideor; 283. 6, tum mei amantissimum te cognoui; 296. 32, ut nihil possit fieri ordinatius; 298. 32, tuis literis nullo modo sum factus certior; 300. 18, fac opus ut appareat.

All the rest of the readings of *Hittorp.* that we have handed down to us agree with *H.* That one, then, as copied from the other seems to me in the highest degree probable. If they were only brothers (so to speak) it would be unlikely that we should have closer agreement than between *Erf.* and *Pal. Sext.* (which *are* brothers), and the resemblance between *H* and *Hittorp.* is much closer. My own opinion is that *Hittorp.* was copied from *H*, and that the latter is a brother of *Pal. Sext.* and *Erf.* The reasons I should give for considering that *Hittorp.* is copied from *H*, and not *vice versa*, is that in our list of differences between the two mss. we found five important omissions in *Hittorp.* which were not found in *H*, viz.: 206. 7; 216. 38; 249. 28; 282. 9; 298. 2.<sup>11</sup> Such omissions might have been made in a copy; a copyist could not have supplied them.

The *Palatinus Sextus*, though agreeing very considerably with *Hittorp.*, and therefore with *H*, still varies so much that we cannot consider them to have been copied one from the other. Though a valuable ms., it is less accurate than either of the other two. It was originally written in Germany (see Gebhard ap. Graev., p. 3, *Pal. Sextus* quem librum in Germania scriptum esse diuersitas a libris Italicis indicat), and is doubtless derived from the same archetype as *H* and *Erf.* The tradition of it is not at all as extensive as that of the *Hitt.* As a sample of its difference from *H*, I shall mention the places in Book XIV. where the two mss. are at variance.

<sup>11</sup> The only passage that is strongly against my theory is 214. 14, ut optima spe maximoque animo *Hitt.*; ut optimo maximoque animo *H.* It is, however, quite possible that Graevius saw that *Hittorp.* read *maximoque*, not *et maximo*, and did not look further to see how it read the other words (see *Variae Lect.*, p. 310). Another passage not so strong, and to be explained in the usual way, is 229. 20.

## II.

## PAL. SEXT.

|         |                                     |                                   |
|---------|-------------------------------------|-----------------------------------|
| 265. 16 | ipso (Hispo <i>edd.</i> ).          | ipse.                             |
| 265. 17 | Plautius me retinet.                | retinet me Plancius.              |
| 266. 1  | facto. <sup>12</sup>                | factu.                            |
| 266. 35 | magis excruciant.                   | plus excruciant.                  |
| 266. 40 | conficior.                          | conficiar.                        |
| 267. 23 | spectare ( <i>expectare edd.</i> ). | asperare.                         |
| 268. 2  | confectam.                          | affectam.                         |
| 269. 19 | Suis S. D.                          | M. T. C. Suis S. D.               |
| 269. 30 | et Tullio iam.                      | Tulliolam.                        |
| 269. 39 | cognossem.                          | cognoscerem.                      |
| 271. 9  | sed metuendus iratus est quiesce.   | si metuendus iratus est quiesces. |

All the above readings of H agree with Hittorp. except two, viz., 209. 19, and the obvious mistake, et Tullio iam, *for* et Tulliolam, in 269. 30.

The full collation of the *Erfurtensis* by Wunder has enabled me to see the connexion of H with this ms. very clearly. Erf. has XII. 29, 21; XIII. 78, 79; XIV. XV. XVI. Some of the very important points of agreement are:—268. 23, non potes (*for* ut potes); 269. 19, Suis S. D.; 269. 25, extra idas; 272. 18, 19 [*per* . . . posse] *omitted*; 273. 8, labrum sit in balneo; 273. 18, tota die; 273. 20, testamenti; 276. 18, dixissem et tamen adolescentem essem cohortatus; 278. 13, a. a. VII.; 283. 41, 2 [*propterea* . . . publice] *omitted*; 284. 28, paterna tua tuque; 284. 34, in ipso se te scias; 286. 36, te ornamento te mihi; 290. 21, mittere boni (*for* mi Treboni); 293. 19, te (*for* plane); 294. 21, scripsi sed si eorum; 295. 26, nocte et die illa et die postera; 298. 28, VII.; 300, dei lionei (*for* dei boni); 300, 13, ff 00 (*for* HS CIO); 303. 17 [*st*] om. Yet the two mss. *differ* considerably. For example, Erf. *omits* the following, which are found in H:—265, 9, 10, Res quanta sit . . . fuerit; 269. 12, nostrum; 283. 7, ornatus; 285. 31, omnibus; 285. 35, publice; 295. 15, Q. F. . . . dicit. And further disagrees at 268. 2, agram et H erga E; 271. 11, miserrimas H miseris E; 272. 33, institutis H institutos E; 276. 21, Ariarathe H ariathate E; 279. 37, ne geribus H generibus E. ne regibus *edd.*; 284. 15, officiis H beneficiis E; 292. 11, cepisti H petisti E; 300. 31, cito H scito E.

So far, then, the conclusion which we have arrived at is that H, Pal. Sext., and Erf. are derived from a common archetype; and that most probably Hittorp. is copied from H. The last and greatest question remains—What is the relation of H to the Medicean?

That M (the Medicean ms.) is the original from which all the other extant mss. of the *Epp. ad Familiares* are copied is the well-known theory of Orelli. That scholar is like the royal champion, and is ready

<sup>12</sup> I think the reading of H is really *facto*, i. e. *facto*, with an *i* above the *t*. For here the *t* goes far above the line, which is quite unusual, except (sometimes, not always) after *s*.

to do battle for the absolute and sole sovereignty of the monarch whose cause he upholds; and that sovereignty, with such a doughty defender, has till recently met with pretty general recognition and acceptance. As, however, I think that H is independent of M, except in so far as both are ultimately derived from a common archetype, it will be necessary to set forth reasons for that opinion in considerable detail; and, accordingly, I add a long list of places where H retains the true reading which has been corrupted in M. They are mostly small matters, but yet not such as would be readily corrected by a thirteenth-century copyist; the more important ones I shall touch on in the latter portion of the Paper. (The numbers refer to the pages and lines of Orelli's edition (1845). Where a square bracket occurs, what is enclosed by it on the left is the correct reading of H; the words on the right, the erroneous reading of M. If no bracket occurs, the reading given is the erroneous reading of M.) I have followed the collation of M prefixed to Baiter and Kayser's edition.

Book IX.—143. 24, ut nullam alleuationem] nullam adleuationem; 144. 1, infidelissimas; 5. 6, ea quae] aequae; 9, diiudicetur] diuidetur; 13, iturum esse] iterum isse; 14, conscripsi; 15, attamen; 21, tui] *om. M*; 23, linguis; 26, cur cum] circum; sint] sunt; 145. 3, interit; 6, hinc] hic; 7, quam H<sup>2</sup>] *om. M* H<sup>1</sup>; 9, athibere; 11, patius; 19, caninio] animo; 21, cito] cita M<sup>1</sup>; 29, nostrae] nostras; 30, in re alia] inre alia; 41, loquemus; 146. 24, ostiae] optiae; 147. 23, caninius] animus; 26, quod] quid; 148. 14, tui] sui; 149. 5, scilicet tibi] scilicet te tibi; 9, gloriā; 11, italiā; 15, utilis sim erit; 41, oblitosne; 150. 17, eo] ego; 40, uolui] *om. M*; 151. 13, ambo] ambi M<sup>1</sup>, ambos, M<sup>2</sup>; 42, quin] qui; 152. 4, teque; 7, audior; 153. 29, ad] at; 155. 2, effungere; 156. 7, reuocare] reuore M<sup>1</sup>; 12, delibitari; 157. 37, significas; 158. 5, dissertos; 20, castra] cassatra; 25, qua] quam; 159. 5, capitis] captis, M<sup>1</sup>; 17, carbones] acarbones; 31, amo uerecundiam] amore cundiam M<sup>1</sup>; 160. 13, non] *om. M*; 162. 7, maximae; 163. 11, uiuere; 21, interpretabere, M<sup>2</sup> H interpretauere M<sup>1</sup>.

Book X.—164. 9, mi] me; 165. 6, poterunt] potest; 14, summa; 31, orbitata; 166. 5, audieram] audieroam; sciu] scilis; 30, mutuo] multo; 42, rursus] rusus M<sup>1</sup>; 167. 4, maioris; 32, libertatem; 35, perbatione M<sup>1</sup>; 168. 2, tum] tu; 39, salutis] satis; 169. 12, patiremur; 37, accedam, consilia] accedam ad consilia; 38, ab H M<sup>2</sup>] ad M<sup>1</sup>; 170. 33, benefici; 39, adiuna] adlua; 171. 7, dignitatem; 14, exitu rebusque H. M<sup>1</sup>] exitum rebus quem M<sup>2</sup>; 15, cum tribus millibus] cum tria millia; 21, constiti] constituti; 22, huc] hoc; 173. 10, esset] est; 18, uiacem] alancem; 174. 6, optime; 8, adluandum; 9, quid] qui; 15, forum] eorum; 30, sunt] sint; 39, huc] huic; 175. 16, iuuare] tuare; 36, multos; 38, eius] es; 176. 5, posset; 6 quam] qua; 8, namque res; 22, transitu; 33, grauitatem; 177. 25, aliena leuitate] alina euite; 27, scripsi quae; 178. 4, et] ex; 29, dubitauit; 179. 6, tantam H M<sup>2</sup>] tantum M<sup>1</sup>; 23, salutariter] salutaris; 30, celeriter me] celeriter a me; 180. 27, assiduitatem; 181. 21, lepidus] iepidus; 26, extrusum] etrusum; 182. 7, nauitatem] natiuitatem; 11, persequendum;



21, selungis; 184. 26, bono animo magnoque sis] bono animo magno animoque sis; 185. 4, transiuimus] transimus; 8, martiae legionis] marti religionis; 10, cornum; 15, Antoniani me insequi] Antoniani anime insequi; 23, ibi amisit] ibi amici sit; 32, res] re; 36, saltis; 39, scrutatur; 186. 30, tradituram; 187. 4, misi] mihi; 17, deduxit] reduxit M<sup>1</sup> eduxit M<sup>1</sup>; 40, men hercules; 188. 14, iunius; 24, prae-sentia] prentia M<sup>1</sup>; 37, binis tabellariis H M<sup>1</sup>] binos tabellarios M<sup>2</sup>; 189. 2, reip.] resp.

Book XI.—192. 7, dissimiles] dissimus; 14, vellet et; 21, aliis H. M<sup>1</sup>] alio M<sup>2</sup>; 34, dodeamus; 193. 24, adiuua; 27, 8 Bruto] bruto; 194. 37, saeium; 195. 37, elabatur *corr. eadem manu ex* elaboratur] elaboratur; 196. 13, libore; 18, commentari; 28, rusus; 197. 12, 13, plancium; 36, prouidendum est] p. sit; 198. 7, sine iumentis] sine eiumentis; 12, pessimae; 20, Venditianis; 27, consiste; 30, abroganter allobriges; 199. 13, habe; 19, recepi; 27, excussaret; 200. 11, nemini] memini; meminit] memini; 12, petere] praetere; 14, munere edilitio] munere dilicio; 30, te mihi] me tibi; 31, iueris; 201. 7, senatuinconsilium; 26, simillimus] simillius; 203. 15, se cum] mecum; 30, quot] quod; 204. 11, collegas; 42, ciuilem; 205. 19, horas quae; 27, multo; 206. 36, audes H M<sup>2</sup>] audies M<sup>1</sup>; 37, dolore; 207. 2, 13, at] ad; 17, petenti] repetenti; 18, ad] at; 23, aut] ad.

Book XII.—209. 35, dirrumpitur; 211. 13, uere; 14, tanque; 42, commendauit; 212. 2, si] sin; 13, a] ad; 26, teque] tequae; 27, teipsuincas; 213. 8, cum] quam; 30, opis] opus; 214. 10, quam Q.] quamque; 21, nostra et] et nostrae M<sup>1</sup>; 36, exercitu; 215. 1, inte etuerc; 18, possimus; 216. 4, quam] qui; 14, nisi] ninisi; 28, frutrata M<sup>1</sup>; 217. 20, confessus; 29, opera; 218. 14, adtamen; 38, instructa; 219. 9, aegyptioque; 28, timorem; 220. 5, regio] reregio; 7, scirem] isirem; classem] clas; 16, constitueretis; 38, ettam; 221. 36, et] ex; 37, caesa; scito] cito; 222. 20, impendentibus; 223. 2, pharti; 10, contumelia; in quo; 30, nos] non; 32, at] ad; 224. 16, eoque; 225. 18, procurata; 31, calvisii] clauis; 32, ut] aut; 33, spem liber-tatis] spem libem libertatis; 40, spem; 226. 9, postrideque M<sup>1</sup>; 227. 11, maximis; 20, splendere; 35, appellaret; 41, agerrimum; 228. 35, tuas] quas; 36, te] me; 229. 9, efficit.

Book XIII.—230. 4, potius] dotius; 5, dolere; 10, a] ac; 17, meme habuit; 231. 25, tua] tu; 232. 17, pertuum; 23, quae et a diis] etidis; 233. 6, caesari; 13, quod] quid; 28, ac tibi epistolam; 29, ea; 41, exprompseris] expropseris; 235. 10, coniectissimum; 15, dignissimo; 23, ad te] ad me; 33, actoritas; 38, pro; 236. 9, id-quae; 16, maiore; 237. 12, quod ego H. M<sup>2</sup>] quid ego M<sup>1</sup>; 17, nec] ne; 32, quam] qua; 238. 22, prosus; 24, commendaueris; 28, titione; 240. 18, opinionones; 26, ueni; 241. 4, seruo; 34, tuerere] uerere; 243. 27, iueris; 244. 10, satis esse notum esse; 15, et familiarem meum; 22, accepissem pergrauem; 245. 13, ut uos soletis] ut uoletis; 34, cupiam; 246. 5, et erunt; 8, adiuues; 22, me ei] mei; 247. 4, coli] cogi; 22, 25, gastris; 26, se ad hominem se necessarium; 249. 38, com-mendes; 250. 8, rebelli; 10, ciuium] ciui; 30, rem] re; 38, satis satis

sibi; 251. 8, tactaris; 17, qui; 19, sis sin eadem; 32, satisfactorius; 34, illutque; 252, 8, memoria; 253. 37, quodque] quoque; 254. 18, meam] mea; 255. 14, cumulis; 38, is ita] ista; 39, optinentem eis; 256. 1, nolim] nolem; 257. 18, commendari; 258. 37, summae huius epistula; 259. 10, Ephesis; 15, laudem; 38, tutissimam; 40, iues; 260. 6, accommodatam; 13, eum] dum; 14, adiuveris; 261. 7, ei] et; 9, ut] ui; ademptum; 262. 22, uituperationis; 23, possit] posset; 263. 7, isti; 15, testes estis] testis est; quamquam] quam; 35, amicitiam; 264. 12, patefacto; 22, patri.

Book XIV.—265. 26, uenditurum; 266. 10, subleuantur; 14, mea] me; 18, te] *om. M*; 34, meae] *om. M*; 40, confitiar; 42, uester et] uerteret; 267. 32, fuissemus] fuisse; 268. 26, non sunt] sunt; 42, diligentissime quae; 269. 1, id quae; 2, Acastus] castus; 9, prodeas] propeas; 270. 1, istic] stic; 21, pompinium; 271. 18, est] *om. M*; 22, si] sit; 27, fortis sitis; 29, meae] mae; 272. 10, cura ut] curant; 15, adfectus; 29, utrum] uerum.

Book XV.—276. 1, tridui] tridui; 19, tuetur; 34, casu cerbissimo patri; 277. 7, discederem] discerem; 9, salute; 14, beneuolentiae quae; 16, diligentiam quae; 29, habuit se iam *M*<sup>1</sup> habuisse iam *M*<sup>2</sup>; 37, actoritas, *M*<sup>1</sup>; 38, gessisse; 278. 27, partis; 42, exsilio] consilio *M*<sup>1</sup>; 279. 3, discederet] disceret; 4, comminuta; 31, castella quae; 38, aduentu; 39, ad] *om. M*; 42, uiniis; 280. 7, pacatis] patis; 22, paratissimus; 23, ut] *om. M*<sup>1</sup>; 30, non] *om. M*<sup>1</sup>; 41, difficulte; 281. 14, firmissimum; 25, omnibus] omonibus; 32, communis] commune; 282. 10, clarior *M*<sup>1</sup>; 33, parum iusta tibi uisa est] parum tibi uisa est iusta tibi uisa est (*uorbis* tibi uissa est *expunctis*); 283. 19, dignitati; 40, scribendas; 284. 14, ignorat; 30, geris] gesseris; 285. 1, maiorumque] malorumque; 22, tuas summas *ultima littera puncto notata M*; 26, consuetudines; 35, missi; 286. 10, longis inter intervalis; 32, contundo; 287. 14, homines cum homines essemus; 27, interesse sed quod; 288. 1, habere; 9, saluus] salutis; 12, coepero] coero; 31, breuis ed; 289. 31, ex urbe exisse] exur exisse; 290. 11, utrum sta; 29, alia] alias; 37, libentissimi; 291. 12, missisti; 20, ceteris] certis; 25, mittimus] amittimus; 30, adortabar; 34, amare.

Book XVI.—292. 11, eadem es sententia] eadem essentia; 11, uideres; 293. 37, quin] qui; et] ut; 40, corpori serui] corpori seruire corpori serui; 41, tanti me fieri] tanti a me fieri; 294. 2, tyroni; 4, duas *H*<sup>2</sup> duras *H*<sup>1</sup> *M*; 7, ubi; 17, ut ualeas] ut tua ualeas; 295. 30, tandem] tantenden; 296. 4, stiteris] steteris; 14, effece; 16, oculus; 297. 11, capuam] capiam; 16, salus] saluus; 20, destituti] destituti; 298. 9, quod] quem; 11, cum] quam; 32, miserius; 299. 20, gaudio] gaudeo; 22, debent debent additis; 29, uolumnia; 301. 10, costantique; 17, dupliciter; 20, noctesque; 31, cotidiania] cotianis; 32, mitylenis; 43, tibi gratulari] ti gratulari; 302. 17, suspiceres; 20, multo erit] multo erit tamen; 36, delegem; 303. 3, excepto; 8, hisdem de rebus] hisdem rebus; diligenti; 34, pocnam] ponam; 35, lugubrationibus; 304. 6, libidinum] libinum; 10, tribunicis.

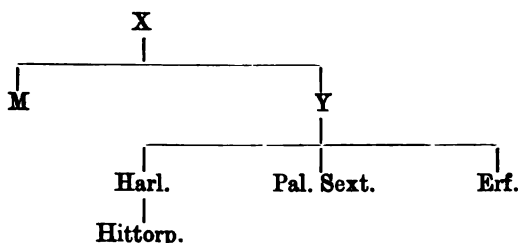
These are, as I have said, small matters. The really important divergences—those that may lead to alterations of the received text—can only be given at the end of this discussion, after a lengthened examination of several of the difficult passages throughout the eight books. But it may not betaking up too much space if we just summarize here the principal *additions* to the received text found in H and omitted in M (the additions are in italics):—155. 40, illos *apud me declamitare me apud eos coenitare*; 164. 21, diligentiae est tuaeque curae tum etiam; 175. 41, consentiente exercitu *concordi ac bene de rep. sentiente* sicut; 189. 41, equitum *M.* Itaque; 198. 7, Nesciebam; *Aquilam perisse nesciebam*: Caesari; 216. 38, scripsi *quam reuera furere inueni*. Quod uero aliquid de his scripsi mirari noli; 239. 13, ὃν φόρο τόνδ' ἄκρος νεφέλη; 246. 12, id tibi *confirmo* in; 276. 18, dixissem *et tamen adolescentem essem* cohortatus.

After these additions we cannot suppose that H was copied from M. However, it would be very wrong to suppose that their common ancestor (so to speak) was far remote. The following are a few of the important points of agreement in IX.–XII., such as show that M and H cannot be very widely disconnected:—145. 33, γλαυκε *eis*; 145. 39, Chrysippas hec (for χρυσίππεια ne an haec; 147. 6, uelle mori uel cum spes si; 152. 19, aestate (*for* est a te); 159. 1, potius<sup>9</sup> *ναρό-τενγμα*; 159. 12, papius (*for* papisius); 160. 36, inter capedonum, Haec; 162. 23; Phartum, 168. 4, in experiendo in ea; 174. 39, subditis; 180. 18, cui arone (*for* Cularone); 181. 10, quod ad Caesarem attinet uidebamus; 183. 33, diuinum rep. beneficium; 191. 31, unquam his (*for* inuidiam iis); 196. 36 [H. S. mihi fuit pecuniae] *omitted*; 199. 5, frigeo opta. non enim (*for* frigeo ὄργων enim); 200. 30, iam iam (*for* Lamiam); 203. 24, commodum de nobis; 208. 8, fide et de constantia; Caesaris *et* totum; 211. 39, tidio; 215. 23, maxime; 216. 15, laudi cenorum; 216. 19, celeriter iter expediri nobis; 217. 33, reliquiae meae diligentiam; 223. 41, senatus aut frequens; 229. 2 [remp] *omitted*; 229. 5, conamur (*for* cogamur).

As to the nature of the *archetype* from which all the ms. was derived, I do not feel certain about it in any respect, except that it was in *uncials*. Such variants as the following will show this:—152. 14, tam M., iam H.; 170. 39, adlua M., adiua H.; 173. 18, alancem M., aiace M. H.; 174. 15, corum M., forum H.; 175. 16, tuare M., iuuare H.; 181. 21, iepidus M., lepidus H.; 189. 4, gessisse M., cessisse H.; 214. 32, pollulum M., pollutum H.; 227. 41, agerrimum M., acerrimum H.; 247. 22, gastris M., castris H.; 261. 7, et M., ei H.; 261. 9, ui M., ut H.; 269. 9, propeas M., prodcas H.; 285. 1, malorumque M., maiorumque H.; 303. 35, lugubrationibus M., lucubrationibus H.

The best conclusion I can arrive at on the whole question is this: that from the original archetype of M—let us call it X—and which, as we see was in uncials, was copied another ms., not now forthcoming (Y.); and from this latter were copied the three German mss., viz. Harleian, Palatinus Sextus, and Erfurtensis; and the Harleian

was the original of the Hittorpianus. The relations of the mss. may be represented in the following figure :—



## PART II.

It will be necessary now to examine specially some of the doubtful passages throughout the last eight books of the Letters, and to see how far we can be influenced by the reading of the Y family. We shall find that family quite inferior to M, but still independent witnesses. The chief fault of Y is the insertion of small words which are not required.

ix. 1. 2. Uidebam enim mihi cum me in res turbulentissimas infidelissimis sociis demissum, praeceptis illorum non satis paruisse M; uidebant enim me in res . . . infidelissimis sociis demissum, &c., H. If we read *uidebam* for *uidebant* in H, we get the right reading; though it is hard to account for the addition in M. Perhaps *cum* is for *tum*, and the *mihi* arose by dittographia of *enī*.

ix. 1. 2. transiturum M, *vulg.*: sciturum H, and one ms. of Guilielmus; Pal. Sext. reads laturum. The reading of M is certainly the lectio difficilior; and it is hard to account for the other variants except by supposing them to be emendations.

ix. 1. 2. diuidetur M; uideatur conj. Cratauder; diiudicetur H, Pal. Sext. rightly.

ix. 6. 2. ut utrobique *vulg.*; utar ubique M; ubi utrique *Graev*; utrobique (omitting *ut*) H. This reading suggests *utrubi*; and we may suppose *que* (*q.*) to have arisen by dittographia from the succeeding *quid* (*q.*).

ix. 6. 3. otiosi si minabantur M; otiosissimi minabantur H, rightly; thus confirming a conjecture of Baier, *cf.* ix. 5. 2, severitatem otiosorum. That the Pompeians were inactive, and at the same time threatened to take severe vengeance on those who did not join them, is pointed out in detail in Professor Tyrrell's edition of *Cicero's Correspondence*, I<sup>2</sup>, p. 103.

ix. 9. 1. *praecipue nunc iam inclinata uictoria M; praecipue cum iam inclinata sit uictoria H, Hittorp.* The reading of *M* is much more antithetical to *nullo tempore*, and in some degree the more difficult reading. *Nunc* (*nc*) and *cum* (*cū*) are often confused; but I think the addition of *sit* is an emendation on the part of *Y*.

ix. 11. 2. *Nam et celeriter una futuros nos arbitror et nondum satis confirmatus sum ad scribendum H add. Sum* is omitted in *M*. But it is required, owing to the preceding *et*.

ix. 13. 1. *ut in ea provincia esset in qua nemo nostrum . . . bellum ullum putare M; putarat add. H, h.<sup>13</sup>* This latter reading would stand very well, as it would assign a reason why Calenus went to Spain, viz. that he and all of us, his friends, thought that the country would be free from war.

ix. 14. 6. *proponas M H; proponam M* (where this letter is found among the Epp. ad Att. xiv. 17). The latter is right, owing to *habeo* following. A little after *H* reads *imitari*, which is an emendation, and a bad one, as *certes* shows.

ix. 15. 1. *intellexi pergratam tibi perspectum esse gaudeo M*, evidently pointing to an omission. Klotz reads, with Lambinus and Orelli, *Intellexi pergratam tibi esse curam meam uoletudinis tuae animumque erga te meum quem tibi perspectum esse gaudeo*. *H* has *Pergratam tibi curam meam uoletudinis tuae quam tibi perspectam esse gaudeo*; and Corradus tells us he found this reading in four mss. We do not hear of Lambinus having any ms. authority for his reading; so, although we have to suppose that *perspectam* got corrupted into *perspectum* in *M*, still I should be most inclined to adopt the reading of *H*.

ix. 16. 2. *ad istorum benevolentiam conciliandum et colligendum M; ad istorum beniuolentiam conciliandam et colligendam H.* Madvig, in discussing Cael. 63, ad tradendum pyxidem (*Opuscula Academica* 380, *sqq.*), objects completely to this construction, and shows at great length that all the examples are either not properly guaranteed or can be got rid of. On this passage he merely mentions that *M* is in error. At ix. 2. 5, some mss. read *ad aedificandum remp.* But there both *M* and *H* have *aedificandam*.

ix. 16. 2. *Nam etsi non facile diiudicatur amor uerus et fictus nisi aliquid incidit eiusmodi tempus, &c., H; aliquid incidat M.* Aliquod is right; but it is simpler to read the indicative (*incidit*), as it has ms. authority, and *diiudicatur* is in the indicative; though no doubt *diiudicatur* may be taken as a gnomic present (= *diiudicari potest*), and so be exempted from the rule of the moods in both clauses of a conditional sentence being the same: *cf.* De Orat. 3. 87. On

<sup>13</sup> By *h* I designate Harleian ms. No. 2751. It contains all the Epp. ad Fam., except some in the middle of viii. and at the end of xvi. It belongs to the *M* family. In a few places here and there I have noticed its readings.

these gnomic constructions, see "Public School Latin Grammar," § 214. 2.

ix. 16. 3. Effugere autem si uelim nonnullorum acute aut facete dictorum famam ingenii mihi est abicienda. So Victorius, followed by Gebhard and Baiter; but subsequently Victorius rejected *famam*, as the word is omitted by M, and adopted the vulg. *offensionem*, comparing Verr. i. 103, *offensionem negligentiae uitare atque effugere non possim*. It means, "the annoyance caused by my sharp sayings." It is highly remarkable that *h* reads *offensionem*; and makes me think that *h*, though undoubtedly of the same family as M, is related to it only collaterally, not in a direct line. H and Pal. Sext. read *opinionem* "reputation," as Quintil. 2. 12. 5, *adfert et ista res opinionem*: cf. Tac. Dial. 15. But I question if this is a Ciceronian usage of the word.

ix. 16. 4. H reads *Hic uersus Plautinus est hic est*—wrongly, no doubt. But it is easy to see how the corruption arose, *Plautiñ* altered to *Plautin*<sup>s</sup>.

ix. 16. 7. H reads just as in M—*Quem tu mihi popillum quem denarium narras? quem tiro tarichi patinam*.

ix. 16. 7. A few lines further on H has—*Puto enim te audisse, si forte ad nos omnia perferuntur illos apud me declamitare me apud eos cenitare*. Baiter tells us M omits from *apud* to *eos* (or *illos*, as he reads). Victorius says these words are absent from all the mss. he has seen; but Manutius informs us they were in two old mss., and are testified to by scholia he had. They are most unlikely to have been invented, and the omission may be easily explained *ex homoeoteleuto*.

ix. 20. 1. *habierunt non omnem*, M; *Nam*, Graev., Baiter; *nos*, Klotz; *nunc*, Orelli. The word is omitted by H altogether. The reading of Orelli is probably right, as we do not require a negative, while we do require an antithesis to *antea*; and *nunc* (*nc*) might readily fall out after *nt*.

ix. 20. 2. H reads just as in M—*Nos iam ex artis tantum habemus, &c.* Wesenberg (Em. Alt., p. 30) considers *exquisite artis* the certain reading, comparing x. 29, where M reads *ben* for *beniuolentia*. But it does so at the end of a line. I imagine a word is lost after *artis* signifying "rules," "maxims," *e.g.* *praeceptis*; cf. Hor. Sat., 2, 4, 2.

ix. 21. 1. *Ain tandem? Insanire tibi uideris* M; *In tantum insanire uideris tibi* H. This is an emendation, and a bad one, on the part of the copyist of H.

ix. 22. 3. *Is Connus uocatus est* H; *uocitatus est* M, *h*. The latter, as the rarer word, is most likely to be right. It is quite an allowable form; cf. Rab. Post. 23.

ix. 26. 3. *si quis quidquid quaereret* M; *si quis quid quaereret* H. I do not think Cicero would use *quisquis* indefinitely, as is found in legal

expressions, *e. g.* Livy (41. 8. 10), Ulpian Dig. 47. 5. 1. The more usual expression is that of H, *e. g.* Verr. II. 60, *si quis quid peteret*.

x. 1. 2. *ut perducatur autem magnae cum diligentiae est tum etiam fortunae M; ut perducatur autem magnae diligentiae est tuaeque curae tum etiam fortunae H.* These words, *tuaeque curae*, in H are unlikely to have been added, and may have easily fallen out *ex homoeoteleuto*.

x. 3. 1. *ignatam M; ignaram H; ignotam (edd.).* The latter is right; for *ignarus* is used passively in good prose only in a few passages of Sallust (Jug. 18, 52) and Seneca (*e. g.* De Ira, 3. 2. though Haase here reads *ignota*), and never in Cicero. Gellius (9. 12. 20) in discussing the question quotes only Virg. Aen. 10. 706.

x. 3. 3. *sed cum intellegerem quid sentire prudenter te arbitrabar uidere quid posses.* So H, adding *prudenter*, which is not found in the other mss. It comes in awkwardly, as it must qualify *uidere*. Still it is exceedingly difficult to account either for its insertion in H or omission in the other mss.

x. 4. 3. *nec nunc omitam H; committam M, edd.* The error of H is due to the *c* dropping out after the preceding *c* of *nunc*.

x. 5. 3. *quod quamquam sine virtute fieri non potuisset H; quod quamquam sine uirtute non potuisses M<sup>2</sup> (potuisset M<sup>1</sup>).* It was probably *potuisset* in the archetype, and owing to *fieri* having dropped out was altered to *potuisses*, with which *consequi* can be easily supplied from the previous sentence.

x. 8. 6. *Ipse ita sum animo paratus uel provinciam tueri . . . provinciamque ut uel omnem, &c., M; Ipse sum animo paratus ut uel provinciam tueri . . . provinciamque uel omnem, &c., H, Hittorp.* This latter puts *ut* in the right place; so in order to get the correct reading we have only to supply *ita* from M.

x. 9. 3. *itineri meo . . . opposuerit M; in itinere meo . . . opposuerit.* Either would stand; but the reading of H is the better of the two of Caes. B. C. III. 30. 2. We generally find the dat. after *opponere* used of persons.

x. 12. 1. *Ita te uictorem complectar rep. recuperata ut magnam partem mihi lactitiae tua dignitas affert (corrected by same hand to adferat) M; adferat H.* The indicative is most certainly right. The sense is: "O that I may be as certain to embrace you on the birthday of recovered freedom as your dignity brings me much joy now."

x. 12. 1. *nec quod progredi uelles M; quo H; quoad (edd.).* This latter is probably the true reading to which M leads, and it is adopted by Orelli, Klotz. *Quo* was suggested perhaps by the preceding *quo* (though it is a different sense). But indeed we do often find in mss. *quod* for *quo*, *e. g.* x. 17. 3. H and M have *quod obside* for *quo obside*.

x. 12. 5. *breuia fugatia caduca existima M; fucata H, Hittorp.* How one of these readings can have arisen from the other is easy to

see when we consider that the archetype was most likely written in uncials. The reading of H is the *lectio difficilior*, and we hear, moreover, that M has *fugatia* with *-ia* written over an erasure. Victorius says Petrarch's ms. had *fugato*. Thus ms. authority seems to be strongly in favour of *fucata* having been the archetype; and it is on that ground principally that I should adopt it. The sense at first sight seems to require a word signifying "short-lived" or "fleeting." But then we shall have the same idea repeated three times over; and "those external things which have a mere semblance of glory, a mass of splendid pomp and pageantry," may well be thought of as "short-lived, painted unrealities, and sure to fall and fail."

x. 12. 5. *complexus es tene* M; *complexus tenes* Orelli; *complexus es et tenes* H, rightly.

x. 14. 2. *tecum et rep. esse facturum* H, making for Orelli's reading, *tecum et cum rep. esse facturum*.

x. 15. 4. *qui sequatur Italiam a uastatione defendat* M; *Italiamque a H*. The asyndeton of M is certainly harsh, and I should like to adopt the reading of H; or if that is thought to be too like an emendation on the part of H, to read *sequatur ut Italiam*.

x. 16. 1. *institit* M; *instituit* H. Either would stand; but the reading of M is preferable as expressing greater urgency.

x. 17. 3. H gives us no assistance on this difficult passage reading *Stadium mihi suum* L. Gellius de *tribus fratribus* Eganiano probavit.

x. 18. 2. *Et cum collega consentiente, exercitu concordia ac bene de rep. sentiente, sicut milites faciunt, &c.* So H. The words from *exercitu* to *sentiente* are omitted in M. They fell out *ex homoeoteleuto*. Surely the copyist would never have been able to compose such an addition, even though he were, as Orelli says, "*nescio quo furore instinctus*." That we should have *consentiente, bene sentiente* and *bene sentiens* in such close proximity, is not a cause of wonder in a letter from Plancus. Those who are not masters of language are very prone to harp on the same word, both in writing and speaking.

x. 18. 3. *constantiaequae meae quae me ad hanc experientiam excitauit* H; *me* is omitted by M. It is absolutely required, however, as *excitare* is a transitive verb.

x. 20. 2. *Sed accepi litteras a collega tuo . . . in quibus erat te adscripsisse, &c.* So M. In H we find *a<sup>te</sup> scripsisse* (sic). This is the reading of all edd.

x. 21. 4. *Accessit eo ut milites . . . conclamarunt* M. The edd. alter to *conclamarint*. H reads *eo q̄ (= qui) milites . . . conclamarunt*. The reading is probably *accessit eo utquis . . . conclamarint*. Plancus was fond of archaisms; see Graev. on § 5 of this letter. On Lucr. i. 753, sqq., huc accedit item . . . utqui Debeat ad nihilum iam rerum summa reuerti, Munro (after Mr. Howard) in defending *utqui* of the mss., says that he unhesitatingly proposes in a letter of Balbus (ap.



Cic. Att. viii. 15 A. 2), an unpolished writer, nam illum tanti facio utqui [qui mss. ut Lamb.] non Caesarem magis diligam. As to the difference between *accedit ut* and *accedit quod*, the best conclusion I have been able to arrive at from the study of all the examples in Cicero which I could find is, that with *ut* either a new fact or a new result (actual or logical) can be expressed; with *quod* only a new fact. Hence *accedit ut* may introduce something that is not the case; but *accedit quod* cannot do so. This is a slight divergence from Mr. Reid's views (De Senec. 16), who considers that *accedit ut* can only signify a new result; but cf. Deiot. 2, Phil. ii. 62.

x. 21. 4. duobus iam consulibus singularibus occisis. So nearly all the mss. H and Hittorp. omit *singularibus*; but it is a strange word to have been added or corrupted from dittographia of *consulibus*, and might have easily fallen out *ex homoeoteleuto*. There is no necessity to suppose, as Graevius does, that these are the words of the soldiers.

x. 21. 5. mortuo non modo honorem sed misericordiam quoque defuturum M; defuturam H. The reading of M is defended by Graevius as a peculiarity of the style of Plancus, who was fond of archaisms: cf. x. 11. 3, neque animum neque diligentiam defuturum (Stevech.); defuturam H. Also x. 24. 1, Amor enim tuus ac iudicium de me utrum . . . sit adlaturus. So M, H.

x. 21. 6. ut exercitum locis habeam opportunis . . . dabo operam So H. *Ut* is omitted by M, but it is added by Klotz and Baiter.

x. 21. 7. Fratrem meum tibi . . . excuses litteris M<sup>2</sup>; excusam (edd.); excusa H, Hittorp. These variants suggest a possible reading, *excuses a litteris*, i. e. excuse on the score of letters, i. e. excuse for not writing to you: cf. Cic. Att. viii. 14, nullum fuit tempus quod magis debuerit esse mutum a litteris. For *a* in this sense without an adj., Suet. Caes. 65 init. milites neque a moribus neque a forma probabat, sed tantum a uiribus.

x. 23. 5. quod C. Catium Vestinum, tribunum militum, missum ab Antonio ad me cum litteris exceperam numeroque hostis habueram. In quo.] So H. The words *numeroque hostis habueram* are omitted in M. As in so many other instances (see p. 384); we find here also H preserving a quite unobjectionable clause, which may readily have fallen out *ex homoeoteleuto*.

x. 24. 7. Quodsi quantum debeo habuero apud eum auctoritatem, &c. So M, H, Hittorp. In x. 22. 3 M<sup>1</sup> reads tantum esse tui caritatem, which Victorius and Gebhard adopt. But it is very bold to assume that Plancus wrote such extraordinarily bad grammar as that. Here our mss. are divided. Amstelod., Mentel., Graev., all read *secum. quantam*, in which reading we shall do well to acquiesce, as Graevius has done already.

x. 25. 1. laudem proximam Planco idque ipsius Planci testimo-

nio M. Planci is omitted by H. The sentence runs better without it, and it looks very like a gloss.

x. 25. 2. Sin autem satisfactum officio reip. satisfactum putas H, Pal. Sext. Hittorp.; sin autem satisfactum reipublicae putas M. A transposition has been made in Y, and we should read, satisfactum officio satisfactum reipublicae. The chiasmus in the other case appears too artificial and affected for Cicero; and, further, the reading of Y will not account for the omission of officio satisfactum in M.

x. 26. 3. protrudimus M; protendimus (*vulg.*); producimus H, Hittorp. The latter word will not stand; it means 'to prolong,' and is applied to what is already existing. The reading of M is right: cf. also *detrudi* in Cic. Q. Fr. II. 13. 3, ita putantur detrudi comitia in mensem Martium.

x. 27. 2. Itaque sapientius, meo quidem iudicio, *facies* si te in istam pacificationem non *interponeres* M; . . . *faceres* . . . *interponeres* H, Hittorp., Pal. Sext.; *facies* . . . *interpones* (edd.) Cicero felt full well that the pacification Lepidus was negotiating would only confirm Antonius in his tyranny, though he chose at first to consider that doubtful, and merely as one of two alternatives. Afterwards he expresses himself as if the negotiation would certainly be prejudicial to the free state. The imperfect subjunctive, then, being, as it is, best supported by the mss., should be read in both cases: "We shall die sooner than yield; and so you would have acted more wisely if you had never mixed yourself up in that negotiation of yours for peace."

x. 30. 3. dexterius cornu fugauerat legionem xxxv. ut amplius passus D. ultra aciem processerit. So H. Manutius had already found this reading in two mss. All the others omit the number of paces. Five miles is rather a long distance for a victorious wing to advance in pursuit; but the fact of ms. authority for the distance must outweigh any such *a priori* objection.

x. 32. 5. Si quod iussissetis feci H (with *sis* underlined, to show that it is to be erased). In the next letter, § 1, we find in H iussetis for iussissetis. This is probably an allowable contraction, as we find *iusti* for *iussisti* in Ter. Eun. 5. 1. 15; though it is more likely to have arisen from the copyist having gone on at the wrong *ss*. But the indicative is certainly required in the passage before us; and it is a mere mistake of the scribe underlining *sis* instead of *ss*.

x. 33. 4. Pontium. Quidam dicunt Octavianum quoque cecidisse H, Hittorp., Pal. Sext., accordingly in Y, but corruptly. Pontium Aquilam: dici etiam Octavianum cecidisse—the reading of M is no doubt right. Pontius Aquilas is mentioned by Dio Cass. XLVI. 38. 3.

x. 34. 1. Equitatum habet magnum; nam omnis ex proelio integer discessit ita ut sint amplius equitum. Itaque, &c. So M, omitting the number. H adds it, viz. M (= 1000), a number likely in itself (Madvig had conjectured *millia quinque* to supply the place of *itaque*),

and one that might easily drop out after equitum. The reading, *xxx.* = 30,000, found in some mss. (see Manutius), is extravagantly large.

xi. 2. 1. nisi persuasum esset nobis conscripsissemus haec tibi M; non scripsissemus H; non conscripsissemus h. Either of the latter readings must be accepted, as the negative is imperatively required. It is supplied by all editors.

xi. 2. 2. putesne M; putasne H. Either would stand. Brutus is rather addicted to short sentences; and the asyndeton is a little awkward if we read the subjunctive. I incline to the indicative.

xi. 4. 2. Cum omnium bellicosissimis H; bellicosus M. The superlative is required on account of *omnium*. The error of M is due to the copyist continuing at the wrong i.

xi. 5. 1. quae maxime ortabam M<sup>1</sup>; ortabar M<sup>2</sup>; hortabar (corrected to optabam) h; optabam H. There is no manner of doubt but that the reading of H is right, and it has been adopted by all editors. It was in the archetype, which being in capitals caused the error of M<sup>1</sup>; and this readily led to the still further corruption of M<sup>2</sup> and its follower h.

xi. 5. 2. certo scio M; certe scio H. The former means "I have sure knowledge;" the latter "I am sure that I know." The former is right. It is a most common confusion in mss. See Mr. Reid's note on De Senec. § 2.

xi. 5. 2. spem reliquam nullam uideo salutis M h; reliquam nullam uideo salutis H, Hittorp. Gebhard's note on this passage is: "Hittorpianus, codex optimus ut in duobus hisce libris expertum *bellum gerere: reliquam nullam uideo salutis*: erudite ac prisce si plures codices accederent." I wish he had quoted an example of *reliquia* in the singular, even from an early author. But *spem* is in all the other mss.; and it is less likely to have been added than omitted. We had better adhere to the ordinary reading of M.

xi. 7. 3. proxime M; proximo H h. This latter form of the adverb is condemned by Boot on Cic. Att. 4. 18. 5. There would be no point in taking it as an adjective.

xi. 7. 3. Quamobrem ad omnia ita paratus sit animatus debes esse M<sup>1</sup>; ita paratus seu animatus M<sup>2</sup>, h, Graev. Schütz; ita paratus et animatus H, Hittorp.; ita paratus seu ita animatus (Stevech); ita paratus ita animatus (Örelli, Klotz, Baiter); and no doubt this is the correct reading to be derived from the several variants.

xi. 9. 1. ne aut Ventidius <sup>elabatur</sup> elaboratur M; elaboratur H (both by the same hand); elabatur h. This latter is the right reading, and is adopted by all editors.

xi. 9. 2. Neque haec idcirco tibi scribo quod te non eadem animaduertere sciam, sed quod mihi persuasissimum est, &c. So the

edd. For the last word M reads *et*, and H, Hittorp. *sit*. The latter arose possibly from *peruasissimumst* being the reading of the archetype. Compare xi. 12. 2, where the erroneous reading of M h, *providendum sit*, probably arose from *providendumst* being in the archetype. Such forms constantly occur in M. Grammatically, *sit* might stand in the passage before us, but it is less forcible and objective than the indicative.

xi. 10. 1. In this difficult passage H gives us no help. It has: *habes*. *Sit an hoc tempore* is *dici uideatur causa malle me tuum iudicium*.

xi. 10. 2. *quantumque cupiditatem hominibus inicit uacuitas* M; *hominibus honoris inicit ciuitas* H; *inicit tua ciuitas* (in margin, *caritas*) h. The right reading is probably: *hominibus honoris inicit uacuitas*. It is unlikely that a copyist would have added *honoris*, and it might readily have dropped out after such a similar word as *hominibus*. It comes in very suitably, defining both *cupiditas* and *uacuitas*.

xi. 13. 1. *Hirtium perisse nesciebam*; *Aquilam perisse nesciebam*; *Caesaris, &c.*, H, Hittorp. Dresd. III. The words *Aquilam perisse nesciebam* do not occur in M. Orelli says that Hittorpius adds these words, *nescio quo amplificandi furore instinctus* (Hist. Crit. XXVII.) But we know (though it is highly unlikely that the copyist knew, unless his frenzy was an inspired one) that Pontius Aquila did fall at the battle of Mutina, Dio Cass. 46. 40. 2; and the words might have easily fallen out, *ex homoeoteleuto*. I should unhesitatingly retain them.

xi. 13. 2. *itinerum multo maiora fugiens* M; *itinerum fecit multo maiora fugiens* H, Hittorp. Dresd. III. Without doubt the latter is right. *Fugere iter* or *uiam* would be a curious Latin expression even for Brutus, and I am unable to find any example of such a cognate accusative. Graevius says: *Non possum non utraque manu amplecti scripturam Hittorpiam, &c.* It is adopted by Schütz, and virtually by Wesenberg (Em. Alt. p. 38); though not by Orelli, Klotz, or Baier.

xi. 14. 1. *conciso exercitu* M; *conscisso exercitu* H. This is a common divergence (*cf.* Plin. Paneg. 34. 2). M is right. You say *concidere exercitum*, but *excindere urbem*.

xi. 14. 3. *Hi noui terrores* (H, Hittorp.) Most mss., including M, omit *hi*. The original reading was probably, as Orelli suggests, *Noui hi terrores*, which got transposed in H. This will account for the omission in M. Transposition is very common in H. Taking (at random) the first five letters of Book xi., we find the following transpositions:—191. 16 (Orelli), *fortunae locus*; 27, *de his*; 30, *Romae esse*; 192. 22, *est leue*; 30, *legimus tuas*; 193. 18, *ita est*; 27, *uas-tai multa*; 33, *conuenirem statim*.

xi. 18. 1. *quid timendum suspicarer putares* M; *quid timendum*

putares suspicabamur H. This latter is read by Orelli, Klotz, and Baiter. Baiter tells us it was a conjecture of Victorius. Orelli quotes it as the reading of M.

xi. 21. 2. Sed tamen cum ego sensissem de iis qui exercitus haberent sententiam fieri oportere, &c. So M. Orelli has this note: *Sententiam ferri* h. l. prorsus ἀνερρ. Fort. *S. C. fieri* secundum morem Cod. M. compendia scripturae perverse interpretandi. H reads *scientiam fieri*. This leads us to what appears to be the correct reading, S. C. iam fieri, 'when I perceived that a decree of the senate ought now to be passed.' *Scientiam* in contraction would be *sciā*.

xi. 21. 4. metum M; metuam (edd.); metuo H. This latter makes much the best sense in the passage. The error in M arose, I think, from the *o* of the archetype having a vertical stroke through it, as was often the case. See Chassant Dict. p. 62, for capital O.

xi. 26. 1. H reads, as does M, dent an decernant. The old arrangement seems to me the simplest, viz. to put a colon at *necne*, and to read: dent an non decernant. In contraction, non (= ñ) might easily have fallen out after the preceding *n*.

xi. 26. 1. Crede mihi nisi ista omnia ita *funt* . . . magnum nos omnes adituros periculum M; *fiant* H. The conditional clause is all dependent on "Crede mihi." Accordingly it is better to read with H, *fiant*.

xi. 27. 2. Multa praetereo quae temporibus illis inter nos familiarissime dicta scripta communicata sint M, h; sunt H. The words *temporibus illis* make the relative sentence refer to special actual instances of intercourse; accordingly we require the indicative, as Graevius, Schütz, and Baiter read. Orelli and Klotz retain the subjunctive.

xi. 27. 4. confirmatio animi mei fracti communi miseriarum metu H, Hittorp; communium miseriarum metu (all other mss. and edd.). The latter is no doubt right.

xi. 27. 7. tam defendo quam me scio a te aequae contra iniquos meos solere defendi H, Hittorp. The other mss. omit *aequae*. It should, however, be retained; and the slightly unusual position it occupies is due to a desire to bring it into close proximity to *iniquos*, a position in which the Latins liked to put antithetical words. The omission arose *ex homoeoteleuto*.

xi. 27. 8. quibus nisi credideris me omnis officii et humanitatis exper iudicaris M; a me omnis . . . expers iudicaris H. This latter makes sense, but it is a very violent statement—too violent for the cordial and affectionate tone of the whole letter: "and if you do not believe this, then I must judge you destitute of all dutiful and natural feeling." And the mode of expression is odd, "You are judged by me," for "I judge you." The editors generally read *expertem*; and it is a trick of the copyist of M frequently to write only the first few

letters of a word; cf. Wesenberg, Em. Alt. p. 30, on ix. 20. 2. I think the editors are right.

xi. 28. 2. *extingui* M; *extinguere* H. The passive after *studeo* is quite allowable, though much rarer than the active. But the active is, I think, right. *Extinguē* might easily get altered into *extingui*, and the stroke is less likely to have been added than omitted.

xii. 1. 1. *pecuniae maximae describuntur* H; *discribuntur* M—the latter rightly. The sums of money were distributed to different persons. Such is the force of *dis*-.

xii. 2. 1. *nisi ut inter me ueterani incitentur* M; *contra* h; *in* H. The latter is right, and read by all editors.

xii. 2. 3. *Ego tuis neque desum neque deero*; *qui siue ad me referent mea tibi tamen in beniuolentia fidesque praestabitur* M; *qui si quae ad me referent mea tibi beniuolentia fidesque praestabitur* H. The latter makes excellent sense, and saves us from having, with the editors, to supply another clause, *siue non referent*. Rühl (Rhein. Mus. xxx. p. 29) considers the passage most important, and that H gives the true reading if we only change *quae* to *quidem*. There seems, however, no great necessity to do so; in fact *referre* generally takes an object: "and if they shall make any applications or references to me," &c. The difficulty to me is how *tamen* arose, which appears in nearly all the mss. It certainly points to *siue* being the true reading. However, perhaps *tamen* was not the original word, but *tum*. Written in full it got mistaken for *tam*, and *in* arose from dittographia. As *tum* appears in cursive writing, it hardly differs from *tibi* (Chassant Dict., p. 95); so that it may thus have fallen out in H.

xii. 3. 1. *quod contra uim sine ui fieri possit*. So M, rightly. But H has a curious reading. At first it had *sex* (Madvig, Opusc. Acad. ii. 273, note, has some examples of this kind of corruption). However, the same hand has corrected it. In xv. 4. 8 all the mss. read *castellaque sex capta* where Madvig rightly alters to *ui*.

xii. 4. 2. *Fama nuntiabat te esse in Syria* M; *te isse in Syriam* H, Hitt. This latter is right, and had been already read by Klotz and Baiter.

xii. 5. 1. *quid ages* M; *quid ageres* H, edd., rightly.

xii. 11. 2. *quantum est* M; *quantum est in te* H. The latter rightly. The copyist of M went on at the wrong *e*, as *est* was probably written E.

xii. 12. 3. *Nam Bassus misere noluit mihi legionem tradere* M; *miser noluit* H. The latter appears to me to be correct: *misere* is used (very frequently in the comedians) for the idea of the pain of too strong emotion (*misere amare*, *misere deperire*, &c.), but can hardly be applied to such a negative conception as unwillingness.

xii. 13. 1. *dum seruis eremus* M; *dum seruis habere<sup>heremus</sup>mus* H,

Hittorp.: dum serui essemus h. This latter is merely a conjecture. The reading of the editors, *seruiremus*, seems right. We want a word in the imperfect subjunctive, as the sentence is in Orat. Obliqua. The *re* got repeated as *se* in the archetype. The copyist of Y wrote *horemus* for *eremus*, which in contracted writing is almost the same as *haberemus* (*hëremus*). It is to be noticed that both in H and Hittorp. *haberemus* was first written, and subsequently altered to *horemus*.

xii. 14. 3. Et quidem multo partius scripsi [quam re uera furere inueni. Quod uero aliquid de his scripsi] mirari noli H. The words in brackets are not found in M; but they make good sense, and can easily have fallen out *ex homoeoteleuto*. They do not appear to be in Hittorp. Here is Gebhard's note as given by Graevius:—"Deleui uocem interiectitiam *classe* post *possit*, ex Palatino primo, Gruteriano, Hittorpiano ac Stevech, Vatic [quibus consentiunt Amstelodam. Mentel. Graevii sec.] ex iisdem et editione principe edidi et *quidem multo parcius scripsi: mirari noli*, eiectis illis quae nusquam comparent *quam reuera furere inueni quod uero aliquid de his scripsi* [quibus assentiuntur quoque Amstelodam. Mentelian. et Graevii secundus]."

xii. 14. 3. putati (sic) M; putari H, Hittorp; pati, edd., rightly. The error, probably in the archetype and corrected there, yet did not fail to be propagated in the other family.

xii. 14. 4. suffragere H: a kind of erroneous alteration very common in mss. The subjunctive is better attested, and the sentence runs more smoothly with it than with the imperative.

xii. 15. 5. persecuti fuimus H; persecuti sumus M. The former is due to a simple confusion of *f* with *s*. There would be no point in reading *fuimus*, for it would mean (if anything) "we stopped our pursuit at Sida"; lit. "we were in a state of having pursued them up to Sida."

xii. 15. 6. studium *et* diligentiam H, Dresd. iii.; *et* is omitted by M.

xii. 15. 7. Itaque c circiter amissis M; Itaque δ c circiter amissis H. This latter is a heavy loss; but how else did the δ arise if it was not in the mss.

xii. 18. 1. Quod mihi uideor ex tuis litteris intellegere te nihil commisurum esse temere nec ante quam *scissas* quidquam certi constituturum M; *scires* H, Hittorp. In Oratio recta the fut. perf. indic. would have been used, which in Orat. Obliqua is transformed into the perf. subj. after a primary tense. We ought to read, accordingly, *scieris*, or better still *sciris*, to which the reading of H leads. There is an exactly similar difficulty in Tac. Dial. 33, where the mss. read *scirent*, but, the text requiring the perfect subjunctive, Schurzfleisch and Andresen read *scierint*, and Heinrich *scirint*.

xii. 19. 1. Eadem rem M; eandem rem H, h; Eam rem (Lambinus: edd.). Perhaps *eamque rem* will account for the corruption to some

extent, the stroke over the *a* getting transferred to *quē*, and it being altered to *dē*.

XII. 19. 2. Quantum copiarum Klotz; Quid copiarum Baiter; copiarum M (omitting the pronoun). But H, Hittorp., and Pal. Sext. have probably the true reading, *Quid enim copiarum*.

XII. 19. 3. Litteras ad te numquam habui cui darem quin dederim M; quin cum dederim H. This latter must be due to dittographia. It would not, I think, be good Latin to translate it "except when I did give them."

XII. 20. Iacessam *nec* tua ignavia etiam *mihi* inertiam afferet M. The reading of H is the same, except that it has *ne* for *nec*, and omits *mihi*. Though Schütz reads *ne . . . adferat*, still I think it more likely that the *c* of *nec* would be omitted before *t*, than that *afferat* would get altered to *afferet*. I should adhere to the reading of M.

XII. 22. 1. tyrannoctoni M; tyranni octoni H; τυραννοκτόνοι, Klotz. These variants serve as an example to show that we have better reason to trust M than H.

XII. 22. 3. senatus aut frequens M, H. The editors read either senatus frequens (Graev., Schütz), or senatus haud infrequens (Klotz, Baiter). Why not *haud frequens*? This was the house to which Cicero addressed the third Philippic. But a house that assented to Cicero cannot have been large, when we consider the nature of the senate at this time, mostly composed of creatures of Caesar and Antonius. See some interesting remarks on the constitution of the senate at this time in Lange Röm. Alterthümer, § 165, III. 519–20.

XII. 23. 1. neque enim quae tu propter magnitudinem et animi et ingenii moderate ferstea non ulciscenda sunt M; fers a te non ulciscenda sunt H. A combination of these two leads to the true reading *fers a te ea* non ulciscenda sunt, a correction already made by Kayser.

XII. 24. 3. Ea tibi ego non debeo commendare, sed commendo tamen M; ea tibi commendo tamen sed non debeo commendare H, Hittorp. The reading of M is right; in Y *tamen* is out of place unless we read, with Guilielmus, *tamenetsi* non debeo.

XII. 25. 3. Fuit enim illud quoddam graecum tempus seruitutis M; caecum tempus quoddam H, Hittorp. I do not believe Victorinus that *caecum* is necessarily a conjecture made by the copyist of the German mss. We saw that the archetype was probably written in uncials. "The dark night of slavery" is a fine expression; and *caeca* is often used in the sense of "dark" with *nox*, e.g. Lucr. I. 1115.

XII. 25. 5. defert M; differt H, Hittorp; affert (codd. Terentii). The reading of H is valuable as showing that Cicero probably wrote *defert*, though in so doing he wrongly quoted the passage (Ter. Andr. i. 2. 18).

XII. 25a. 6. defetigati M; defatigati H. There is the utmost



diversity in mss. as to the orthography of this word. Bambrach (Neugestalt. d. lat. Orthog. p. 78) quotes Probus—*Fetigati* an *fatigati*? melius *fetigati* quod *fetigo* dicatur et *fessi* non *fassi*.

xii. 26. 1. Tanta enim liberalitate *se* tua usos praedicabant, &c., M; esse tua H. The reading of the archetype was probably *se esse*.

xii. 28. 1. Sed metuisti, ut ais, ne nimis liber in ulciscendo uiderere. Metuisti igitur, ne grauis ciuis ne nimis fortis ne nimis te dignus uiderere. So the editors; but the mss. M and H, Hittorp., Pal. Sext., read *minus* for *nimis* in both cases. Graevius attempts to defend the mss., but he fails to explain how *ne* grauis ciuis is to be taken. He asks—Quid est *nimis se dignus*? It is analogous to the English expression "to surpass oneself." To be *liber* was to be *fortis* and *se dignus*; and these latter words Cicero is substituting for the word (viz. *liber*) which Cornificius had himself used.

xii. 30. 5. quo studiosior iussis M; eius sis, edd.; tu sis H; tu eius sis, Hittorp., Pal. Sext. This latter is the right reading. It accounts for all the corruptions, and we require *tu* as an antithesis to *ego*. This is one of the few examples I have found of Hittorp. preserving a correct reading which is not found in H; but I cannot be too sure, knowing Graevius's way, that it is quoted correctly.

xiii. 1. 2. traditus mihique commendatusque est M; traditus mihique est commendatus H. This latter reads very smoothly, and is probably right. It will be a considerable difficulty in any case to account for the insertion of *que* in both places in M.

xiii. 1. 3. cum idem ut ad te scriberem rogasset H; *ut* is omitted by M, but supplied by most editors.

xiii. 4. 1. H reads nec in honoribus meis nec meis laboribus.

xiii. 5. 1. impedis M; impediri H h; impedio edd. And we do no doubt require a present tense. Graevius says that some mss. read impediri uelim. If so, this is the true reading, the corruption having arisen from the copyist having continued at the wrong *i*. But it is unlikely that both families should have thus erred.

xiii. 6. 2. Itaque hoc eius officium quod adhibetur erga illos H h. This is undoubtedly correct. From the error of M, which reads *adhibeturga*, in omitting *er* after *-ur* (we must remember, too, that *erga* is written *g* in cursive hand), the ordinary reading is derived, viz. quod adhibet erga illos, which makes good sense, but does not account for the variants.

xiii. 6. 5. pertinere arbitrabor M; arbitror pertinere H. But the future is required. Hittorp. reads (according to Graevius) *arbitrabor pertinere*; but I question if Graevius was thinking of anything beyond the fact that the words were transposed (see some remarks on p. 378).

xiii. 7. 1. quae tua summa in me obseruantia M; tuaque H, h. Either would suit; but the reading of H runs smoother. Klotz and

Baiter, objecting apparently to the harshness of M, read after Orelli, *proque tua summa*, &c. But what is given by H, inasmuch as it has *ms.* authority, is more likely to be correct than that.

XIII. 8. 1. *te me studiosissimum M; te mei studiosissimum (edd.); te erga me studiosissimum H.* This latter looks as if it were the correct reading; for though *studiosus* is not found constructed with *erga*, this is the regular preposition to express any feeling towards a person. But how to account for the omission of *erga*? I do not think the copyist of H could have made such an emendation.

XIII. 8. 2. *Sed tamen cum Caesar Sullanas uenditiones et assignationes ratas esse uelit quo firmiores existimentur suae, si, &c.* So the *ms.*; but H for the last two words has *sua<sup>ae</sup> ē*. Probably the *t* is a corruption of the common symbol for *uel*, and this is an attempted, but erroneous, correction of *ē* (= est). It cannot be a gentile pronoun; we know of *nostras*, *uestras*, and *cuias*, but not *suas*; besides it would not have the meaning here required.

XIII. 9. 2. *quae societas ordine ipso et hominum genere.* So H, Hittorp. This reading is justly adopted by Graevius. The Bithynian branch of the *publicani* are a great factor in that state, both as belonging to the general corporation of *publicani*, and as being able men in themselves.

XIII. 10. 2. *Sed tamen causa communis ordinis.* So H, Hittorp. In nearly all other *ms.*, including M, we find *causa* omitted. But it must be supplied.

XIII. 10. 3. *uideor mihi M; sed uideor mihi H.* This makes the connexion more smooth, and may be adopted; though, indeed, the copyist of H is addicted to inserting conjunctions. Take, for example, xv. 9: H adds in that letter *et* six times where apparently it was not in the archetype, *e. g.* 283. 28 (Orelli), *et non*; *et nos*; 30, *et nam*; 35, *et unum*; 39, *et cura*; *et quae mihi*.

XIII. 10. 3. *et usus. Nam H; eius uinam M.* If H had been copied from M, it could never have got this right reading out of the corruption of M; though it is easy for us to see how that corruption arose.

XIII. 11. 3. *mihi uero eo gratius feceris quod, &c., H; eo* is omitted by M. But it might more easily have dropped out than be added; and, as added, the sentence is more idiomatic.

XIII. 15. 1. Here H adds after *εἴρη* the words *ὃν φόρο τὸν δ' ἄχρεος νεφέλη ἐκάλυψε μέλαινα*, which, with *ὡς φόρο* for *ὃν φόρο*, is the full line of the Odyssey, 24. 315. M has only *ὡς νεφέλη ἐκάλυψε μέλαινα*. Greek, as it appears in H, is not plain at all. It must be very like that of the Erfurdt *ms.* Here is the way these two lines are copied in H. ΑΑκίμο cεccΑ ιΗΑΤΙcεcκαio ψΙΤΟΝ ω Νεγεγνιον φοΤο ΤΥΝαΔκεος ΝΕφελιεκαλ ψε ΜΑΛΙΝα.

XIII. 16. 4. iam pridem M; iam diu pridem H. This latter is two variants run together. Either iam diu or iam pridem would suit.

XIII. 19. 2. Explorata uero eius incolumitate omnia a te studia summo cura peto M; omnia a te summo studio et cura peto (H. Hittorp., Pal. Sext.); omnia a te studio summo cura peto (h). The mss. seem to point to *studio*, not *studia*. When it got transposed, it was attracted by the preceding *omnia*. The reading of H seems right. For *studio summo et cura*, cf. iv. 3. 3.

XIII. 21. 2. For molestissimis temporibus H reads molestissim<sup>9</sup> is temporibus, the *is* being added in a different hand and different ink.

XIII. 24. 2. gratias M; grates H. Both are good Latin: cf. Plaut. Trin. 4. 1. 2, laudes ago et grates gratiasque habeo. The reading of H would be the more likely of the two to be corrupted; but as Cicero nearly always uses *gratias*, and as most of the mss. seem to read it, we shall do well to retain it.

XIII. 26. 1. L. Mescinius ea mecum necessitudine coniunctus est quod, &c., M; ea causa et necessitudine mecum coniunctus est H. The latter is most probably an addition which arose from dittographia of *ea*; for *causa* in contraction would be *cā*: see Chassant Dict. p. 14.

XIII. 27. 4. Ego cum tuo Seruio iucundissime et coniunctissime uiuo H; *et* is omitted by M. The editors mostly read *iucundissimo* after Victorius. But Cratander was right in adopting what we now find to be the reading of H.

XIII. 28. 3. Illud quod supra scripsi id in meque recipio M. A second verb is wanted; *spondeo* and *promitto* were proposed; but we find H and Pal. Sext. reading—Illud quod supra scripsi id tibi confirmo in meque recipio. This has all the appearance of being what Cicero wrote. In uncials D and O are very like one another; so the corruption in M may be *ex homoeoteleuto*.

XIII. 28a. 2. Quare tantum a te peto ut qua mea facies M; ut ea facias (omitting *cum*) H. But *facias* is corrected in H from *facies*. The whole reading of H appears to me a piece of emendation by a second hand after *cum* had somehow dropped out.

XIII. 29. 1. Ab his initiis . . . nostris in te amor profectus M; *noster* H; rightly.

XIII. 30. 2. siue aberit siue non uenerit in Siciliam M; siue aderit (edd.); siue abierit H, Hittorp., Pal. sext. This latter makes fair sense. "I wish you to consider Manlius a great friend of mine [even though he is not present with you], whether he has left Sicily or not arrived in it yet.

XIII. 35. 1. Nomen autem Avianii hic secutus est H, Hittorp.; *hic* is omitted by M. The reading of H is very likely right, for the context at once prevents *hic* being referred to Caesar.

XIII. 36. 1. dixit nihil esse quod de Mega uereretur M, rightly; quod demetrio graueretur H, Hittorp., Pal. Sext. This is plainly a

mistaken alteration owing to a wrong division of words in Y. The word should have been *grauaretur*.

XIII. 42. 1. H, Hittorp., Pal. Sext. add *familiaris* after *meus*. It is probably a gloss explaining *meus*. Cicero would have said *familiaris meus*: cf. Lael. 89. In h *familiaris* is added above the line.

XIII. 43. 1. L. Egnatii Rufi R. familiarissime utor quo ego uno equite et cum consuetudine cottidiana, &c., H. This is a good example of how the order of words gets confused in that ms.

XIII. 53. 1. ut omnibus in rebus ei *commodos* M; *commodas* (H, by first hand), *commodos* (H, by second hand).

XIII. 53. 2. sed non mihi uideor . . . singulas ad te eius causas perscribere M. In H is added *debere* after *perscribere*, rightly; for *uideor mihi* means "I think", not "I think right": cf. Fam. iv. 13. 5; and *debere* could easily fall out after *perscribere*.

XIII. 55. 2. peto abs te pro nostra necessitudine M; necessitate H, Hittorp., Pal. Sext. But M is undoubtedly right. *Necessitas* in this sense of "intimacy" appears to be found only in Caesar (apud Gellium, 13. 5), and in Cic. Sulla, 2; but the best mss. in the latter place give *necessitudine*. See Mr. Reid's critical note on the passage.

XIII. 56. 1. pro tuis in me summis officiis M; officiis uel beneficiis H. This is a case of two variants having crept into the text, as we saw at XIII. 16. 4, iamdiu pridem. Compare also XIII. 63. 1, cum plurimis eius beneficiis uel officiis.

XIII. 56. 1. ut edicti Mylasii Romam mitterentur M; ut edicti a Mylasinis Romam mitterentur H, Hittorp., Pal. Sext. This latter is the preferable reading. The form of the adjective is *Mylasenus* in Livy, 38. 39. 8, or *Mylasensis*, 45. 25. 13. Probably the *a* fell out owing to its similarity in capitals to part of capital M. The *ἑκδικος* of a town under the Republic and early Empire was an advocate who conducted at Rome legal cases in which the town was one of the parties. In Trajan's time he was a regular magistrate in each town, who represented the provincial governor and conducted all affairs between him and the town. Pliny, Epp. x. 111. See Marquardt, Röm. Staatsverwaltung i. 214, and his references.

XIII. 64. 1. Si te fautore usus erit sicuti profecto et utetur et usus est M; utitur et usus est H. This latter makes rather better sense than the reading of M; but there is little ms. authority to support it, and it would have been less likely than the future to have been altered.

XIII. 69. 1. multaque acciderunt in quibus et benevolentiam eius erga me *experirer* M; *expertus sum* H, Hittorp. The latter reading is the natural one to expect; but how did the lectio difficilior of M arise? The reading of M is right. "Many events arose of such a nature as to let me experience," &c. The copyist of Y was probably,

as we have seen, one who had a little knowledge of Latin, and at times did not adhere very closely to what he found in his text.

XIII. 69. 1. At the end of this section H reads: *ut intellegeres me non uulgare nec ambitiose*, just as in M.

XIII. 70. *ut intellegant hanc commendationem sibi usu magno . . . fuisse* H; *usu* corrected to *usui* M; *usui* h. The dat. of the fourth declension often ends in *-u*, e. g. *Parce metu Cytherea*, Virg. Aen. 1. 257. See also a discussion in Gellius, 4. 16. 5. We find, moreover, in Cic. Balb. 24, the three principal mss., Paris, Gemblach, and Erfurd read *usu* for *usui*, as does the principal ms., the Vaticanus, at Phil. 9. 15.

XIII. 72. 1. *omnia te esse facturum liberalissime recepisti* H, Hittorp. *esse* is omitted by M. The prevailing use did not insert *esse* after such verbs as *spondeo recipio*; so that we had better suppose the reading of H to have arisen from a double repetition (*eē = esse*) of the *e* in *te*.

XIII. 72. 2. *quibuscumque rebus Caerelliae benefeceris* H; *benigne feceris* M. This latter is the proper Ciceronian expression for "doing a favour." Off. 1. § 42, sqq.; Planc. 47, Deiot. 36. *benefacere* in Cicero would, I think, mean to manufacture an article well: cf. Ver. iv. 37, sqq.

XIII. 73. 1. *Quodsi Romae te uidissem* M; *Quodsi Romae fuisset te uidissem* H, Hittorp., Pal. Sext. The latter is doubtless right. *Romae* was written as nearly always *rome*, and the copyist went on at the wrong *e*.

XIII. 74. 1. *L. Egnatii . . . negotia commendo. Tanta mihi cum eo, &c.*, M. *Tanta enim mihi cum eo, &c.*, H, rightly, I think; for the sentences run so much more smoothly with *enim* added. But it cannot be denied that H sometimes introduces *enim* where it has no right to be, e. g. in xiv. 5. 1. H reads *Neque enim sum admiratus*.

XIII. 76. 1. *uterer mea consuetudine* M; *utere* corrected into *uterer* H. In H there is a stroke under the first *e*, and the *r* at the end is written by another hand in other ink. The original reading may well have been *uterer uetere mea consuetudine*. For *uetus consuetudo*, see Quintil. 1. 6. 43.

XIII. 76. 2. *ut honoris mei causa quam liberalissime C. Valgium Hippanum tractetis* H; *quam* is omitted by M, owing most likely to the copyist having gone on at the wrong *a*.

XIII. 77. 3. *Hunc tu si (omitted by H, first hand) mihi restituendum curaris non possum dicere quam mihi gratum futurum sit* M; *futurum fuerit* H. The reading of M is of course right. The sentence if not dependent would be in the future—*si curaris, gratum erit*; the reading of H would be only allowable if the simple sentence had been—*si curares gratum esset (or fuisset)*.

xiv. 3. 1. *diligentiam* M; *indulgentiam* H, Hittorp. The latter is rather more tender (and so perhaps the more Ciceronian) than the reading of M: "I ought to have been better and kinder to my wife and children."

xiv. 3. 4. *ut ad me continuo initia rerum . . . posse scribere* M; *possit* H, Hittorp. The editors read *posses*. Guilielmus prefers *possetis*, which is an awkward change of number. There does not seem to me any particular objection to adopting *posset*: "I am sending you Aristarchus that he may write back at once" (i. e. when he has found out the real state of affairs from you and others).

xiv. 7. 1. *Omnes molestias et sollicitudines quibus et te miserri-  
mam habui et id quod mihi molestissimum est Tulliolam, &c.,* M;  
*habui id quod mihi molestissimum est et Tulliolam (tullis iam H),*  
H, Hittorp. The position of *et* in H, Hittorp., is the one adopted by  
Graevius, and appears to me right. The reading of M may have  
expressed the real opinions of Cicero; but he was too polite to say so  
to Terentia.

xiv. 9. *dolor et de Dolabellae ualitudine et de Tulliae.* So H,  
Hittorp., Pal. Sext. The word *de* before *Dolabellae* is omitted by M;  
but it is absolutely required. The omission arose from the copyist  
going on at the wrong *d*. Graevius reads *e*, but *de* is a more usual  
construction, and has good mss. authority.

xiv. 13. 1. *Si metuendus iratus est quiesces tamen ab illo fortasse  
nascetur* M. Sed (= S.) *metuendus iratus est quiesce tamen ab illo  
fortasse nascetur* H. The argument of the passage is—If it is to be  
feared that Dolabella will be angry in case a divorce is sent him, do  
nothing: if we wait long enough probably the initiative will be taken  
by him, and he will send a divorce himself. Accordingly there is no  
place for *tamen*. The reading of H (with *si* for *sed*) is otherwise cor-  
rect; but for *tamen* read *initium*, which palaeographically differs but  
little therefrom. *Initium* would be *itū*: *tamen* would be *in*. For *ini-  
tium nascitur*, cf. Verr. i. 109.

xiv. 14. 2. *His de rebus uelim cum Pomponio consideretis* M.  
After *uelim* H inserts *ut*; wrongly; for Latin idiom almost always  
omits it in such cases; and where it is found, e. g. Fam. iv. 14. 4,  
I should be inclined to suppose that it has arisen from dittographia, as  
it might easily do after *m*.

xiv. 20. *Labrum si in balneo non est ut sit* M, edd.; *Labrum si  
in balneo non est fac ut sit* h; *Labrum sit in balneo non est ut sit* H.  
In H the words *non est ut sit* are underlined, signifying that they are  
to be left out. This is a decidedly remarkable reading. It makes us  
think that *non est ut sit* is a gloss which has crept into the text, and  
signifies that we should read *sit* and not *ut sit* which Cicero had used  
just above.

xiv. 22. Nostodie tabellarios nostros expectamus M; nos tota die, &c., H, Hittorp. This latter would lead us to read *nos totam diem*; but can we suppose that Cicero would have been able to calculate within a day when the letter-carriers would come?

xv. 2. 5. Cum ego ei gratulatus essem idque me gaudere dixissem *et tamen adolescentem essem* cohortatus ut recordaretur, &c. So H, Hittorp., Erf., Pal. Sext. The words in italics are omitted by M. This is the passage on which Wunder based his argument against Orelli for Erf. being independent of M. Orelli's splendid defence of a hopeless case may be read in his Hist. Crit. Epistolarum Cic. ad Fam. sqq. The words fell out *ex homoeoteleuto*.

xv. 2. 6. amicosque in patris eius atque aui iudicio probatos (probato M). So nearly all the mss., wrongly inserting *in*; for *probari in aliquo* means to be proved by doing or being engaged in something. The Mentelianus ms. has not *in*. It not improbably took the place of *et*.

xv. 2. 8. H reads, as do all the mss., *liberaret*. Ernesti and Wesenberg (Em. Alt. p. 52) are, I think, quite right in altering to *liberasset*. The whole sentence is in past time.

xv. 4. 6. Cumque magnum bellum in Cappadocia concitaretur si sacerdos armis se quod facturus putabatur defenderet, adolescens et equitatu et peditatu et pecunia paratus, *et toto* iis qui nouari aliquid uolebant, perfecti, &c., M. The reading of H, Hittorp., Pal. Sext., Erf., is *et tuto*. Victorius wishes to read *omnino*; and reference to Graevius's edition will show the perplexity of editors. But why not adhere to the reading of Y; or vary it slightly by reading *et ex tuto*? The rebellious priest was young, well-supplied, and in a safe position for the disaffected to flock to. For *tuto* = *tuto loco*: cf. Fam. xii. 2. 3, ut in tuto sitis.

xv. 4. 12. Quis enim id non facit H, Erf. (There is no account that I can find of Hittorp. or Pal. Sext.) This reading had been already adopted by Victorius, and later by Baiter. Quis enim te id M<sup>1</sup>; quis enim de te id M<sup>2</sup> h; quis enim in te id, Lamb., Orelli, Klotz.

xv. 4. 14. exercitu in bello M<sup>1</sup>; exercitum inbecillo (M in margin); exercitum in bello H Erf. These variants point to *exercitu imbelli* as the right reading.

xv. 5. 2. continentia M; conscientia H, Hittorp., Erf. The reading of M is right; for though *conscientia* means both "consciousness" and "conscience," it does not mean "conscientiousness."

xv. 7. 1. amantissimum te cognovi. So H, Hittorp., Erf. *te* is omitted by M. This seems another example of Y adding small words to make the sentence plainer.

xv. 8. a te id quod suesti peto M; consuesti peto H, Hittorp., Pal. Sext., Erf. The reading of Y is no doubt right, and was adopted by Cratander, followed by Klotz and Baiter.

xv. 10. 1. ut quam honorificentis se senatum consultum . . . faciundum cures M; ut quam honorificentissime, &c., H, Erf., h. This latter is right. The editors, including Klotz and Baiter, read *honorificentissimum*; but the latter acknowledges that even M would naturally lead to *honorificentissime*.

xv. 12. 2. efficias M; efficiasque H, Pal. Sext. A conjunction is badly wanted, Baiter adding *et*; but we shall do better to adopt the reading *efficiasque*, which has mss. authority.

xv. 14. 3. unus scilicet uni fructus. So M and h; but the latter has a stroke drawn through *uni*. H, Hittorp., Pal. Sext. omit *uni*. The emendation of Orelli seems to be the most satisfactory, viz. *animi* for *uni*; unless we follow Y in omitting the word altogether.

xv. 14. 4. Sed si quae sunt onera tuorum M, sed si qua sunt onera tuorum H, h. The form *qua* is more usual: see Roby, vol. i. § 379.

xv. 15. 1. H omits *necessaria*, as do most mss. The Amstelodamus and Mentelianus, however, retain it. Indeed it is difficult to see how the word can have appeared in M originally unless it were in the archetype. It is best, I think, to read *non necessarii*, with Madvig and Wesenberg.

xv. 16. 2. His autem spectris etiamsi oculi possent feriri quod uelis ipsa *currunt*, animus qui possit ego non uideo M; incurrunt H, Hittorp., Pal. Sext. The best correction to make is not *uel iis* of Victorius, nor *quod quum uelis* of Wesenberg (in the archetype *cum* would have been *cū*), but *quod quae uelis*. The difficulty to Cicero is how, on the Epicurean theory, the mind gets stimulated in the first instance. The most common word for objects striking on the eye is *incurro* (Cic. Att. xii. 21. 5; Fam. ii. 16. 2; Quintil. x. 3. 16, *incurrere* Quintil. x. 3. 28; *incurtio* Cic. Fin. i. 21); and as such is supported by Y, it had best be retained. No doubt *accurro* is also found, Cic. De Div. ii. 138 (a very similar passage to our present one), *istae imagines ita nobis dicto audientes sunt ut simul atque uelimus accurrant*.

xv. 19. 3. nam habet damnatos quos pro illo nobis restituat nec ipse *sectorem* desiderabit M; *sectatorem* H, Hittorp., Pal. Sext. As Cassius makes many verbal jokes in this letter (*e.g.* the two senses of *bona* and of *restituat*), we might read, perhaps, *sectatorem nec sectorem desiderabit*. This will account for the variants, and will save the clause from being somewhat bald.

xv. 21. 3. H, like most other mss., does not give *de uno* twice, as M does.

xvi. 1. 1. neque nunc muto M; neque enim nunc muto H. This is an example of H adding one of those small conjunctions out of



place (cf. xiv. 5. 1, Neque enim sum admiratus, &c., H, where enim makes no sense); it does not appear in either Pal. Sext. or Erf.

xvi. 1. 3. Nos ita te desideramus ut amemus. So nearly all mss.: "My longing for you is conditioned by my love." But H has a line under *desideramus*, and *uideamus* written above it. The fact that *uideamus* appears in no other ms. leads us to suppose that it is some sort of a gloss, perhaps *uidē* (= *uidere*), supplementary of *desideramus*, which the copyist of H supposed to be a variant.

xvi. 4. 1. H had *uis*; but the *o* is deliberately scratched out. It is very rare that an originally right reading in H is altered.

xvi. 5. 1. Volebam ad te Marionem *remittere* quem cum meliuscule tibi esset ad me *mitteres* M; Volebam ad te Marionem *mittere* quem cum meliuscule tibi esset ad me *remitteres* H, Hittorp.; *remittere* is read by Erf. and Pal. Sext. in the first clause, but in the second both read *remitteres*. The reading of H, Hittorp. is certainly right; and the corruptions can be readily accounted for by the proximity of *-nem* and *me*.

xvi. 6. 1. Tertiam ad te hanc epistolam scripsi eodem die M; scripsi *sed* si eodem die H, Erf. *Sed* is written thus (S). It is often confused with *si*. I think the *si* of H, Erf. arose from dittographia; but that *sed* is sound. To suppose a double dittographia of the *-si* in *scripsi* is violent. "This is the third letter I have written to you—aye, and on the same day." The use of *sed* = "aye, and" is mostly post-Ciceronian; but it is found in Cic. Orat. 97, hic est enim cuius ornatum dicendi et copiam admiratae gentes eloquentiam in ciuitatibus plurimum ualere passae sunt, *sed* hanc eloquentiam quae cursu magno sonituque ferretur.

xvi. 7. 1. Nemo nos amat qui te non diligit. So most mss., rightly. For *nemo qui non* (or *quin*) always takes the subjunctive. But H and Hittorp. erroneously read *diligit*. Erf. has *diligit*.

xvi. 8. 2. Ego certe singulos eius uersus singula testimonia puto H, Erf. It had been already adopted by Cratander. M erroneously adds *eius* again before *testimonia*, for which Orelli has conjectured *ἀληθείας*, and Klotz *ueritatis*.

xvi. 9. 2. Inde austro lenissimo, caelo sereno, nocte illa et die postero, &c. So M and most mss. But H and Erf. read, nocte *et* die illa et die postera. We can only suppose that the common collocation *nocte et die*, added to the close proximity of *et die*, led to this superfluous addition.

xvi. 9. 3. me cui iussisset curaturum. Ecum et mulum Brundisii tibi reliqui M; curaturum (curatum Erf.) metum et mulum, &c., Pal. Sext., Erf., H (by first hand); curaturum medicum et mulum H (by second hand). The reading of M is doubtless right; and the correct but unusual spelling, *ecum* (for *equum*), led to the various interesting corruptions of the other mss.

xvi. 12. 1. *salus mea . . . atque uniuersae reip.* M; *salus mea . . . atque uniuersae senatus et reip.* Erf., Hittorp., H (the latter adding also *et* (>) before *senatus*). The reading of Y is probably correct. The addition is rational, and too extensive to have been made by the copyist.

xvi. 12. 3. *accepimus* M, *edd.*; *accipimus* H, Hittorp., Erf. Surely the reading of Y is right. The verbs from the beginning of the paragraph are in the present, *uides . . . feruntur*; and also in the next paragraph, *spes est*.

xvi. 17. 1. *ἀφομιλῆσα* *satis scis etueum* M; *satis scite. Tu eum* H, Erf.; *satis scire. Tu eum* Hittorp., Pal. Sext., according to Graevius. The reading of H, Erf. is unquestionably right, and had been conjectured independently by Wesenberg and adopted by Baiter.

xvi. 18. 1. *τῖψιν* M; *τῶψιν* H, Erf.; *τέρψιν* vulg. Even independently of its having *ms.* authority, the reading of H and Erf. is the better of the two; for it is a more definite prescription, *τέρψιν*, "amusement," requiring some word like *ἡσυχον*, signifying "gentle" or "quiet," along with it; and, moreover, I is more likely to drop out than E.

xvi. 21. 1. *aduentus adoptatissimus* M; *aduentus optatissimus* *edd.*; *exoptatissimus* H, Hitt., Erf. This latter is the adjective that would naturally be used with such a word as *aduentus*: cf. Cic. Att. v. 15. 1, *Nihil exoptatius aduentu meo*.

xvi. 24. 2. *Sed st. litteras tuas exspecto.* So all the editors. *Sed si*, &c., M and most *ms.*; a few read *sc* (= scilicet). One *ms.*, according to Ursinus, has *st*. H has simply *Sed* (written S,) *litteras tuas exspecto*; and such I believe to be the right reading. Making all due allowance for the conversational tone of the letters, *st* = "hush" is really too colloquial. And we must notice that in the other two passages of Cicero's Epistles, where editors read *st*, viz. Att. ii. 1. 10, and Att. xv. 3. 1, it is found in the *ms.* as *si*, and after *sed*. In *ms.* the contractions for these words are so like one another that they are often confused. In all three cases I believe that *si* arose from dittographia.

We have seen, then, reason to believe that H has preserved either the correct reading, or what leads to the correct reading, in the following passages, where M is in error:—ix. 1. 2; 6. 3; 11. 2; 14. 6; 15. 1; 16. 2; 16. 7; 25. 1; 26. 3. x. 1. 2; 5. 3; 8. 6; 9. 3; 12. 5; 18. 2; 18. 3; 20. 2; 21. 6; 23. 5; 25. 1; 25. 2; 27. 2; 30. 3; 34. 1. xi. 2. 1; 5. 1; 13. 2; 14. 3; 18. 1; 21. 2; 21. 4; 26. 1; 27. 2; 27. 7; 28. 2. xii. 2. 1; 2. 3; 4. 2; 5. 1; 12. 3; 14. 3; 15. 6; 18. 1; 19. 2; 25. 3. xiii. 1. 3; 6. 2; 7. 1; 9. 2; 10. 2; 11. 3; 19. 2; 27. 4; 28. 3; 29. 1; 53. 2; 56. 1; 70. 1; 73. 1; 76. 2. xiv. 7. 1; 9. 1. xv. 2. 5; 4. 6; 8. 1; 10. 1; 16. 2. xvi. 5. 1; 8. 2; 12. 1; 12. 3; 17. 1; 18. 1; 21. 1; 24. 2.

To the list of discrepancies between H and Hittorp., noticed on pp. 377-8, are to be added the following, which I discovered on a second review :—

| HARL. |                               | HITTORP.                   |
|-------|-------------------------------|----------------------------|
| 146.  | 13 ocio soluo.                | ocio solus.                |
| 178.  | 4 et ( <i>before</i> quibus). | <i>omitted in Hittorp.</i> |
| 184.  | 36 potuissamus.               | possemus.                  |
| 199.  | 27 ille diligenter fecit.     | diligenter ille fecit.     |
| 200.  | 4 facile a te.                | a te facile.               |
| 300.  | 15 Mathonem.                  | mamentonem.                |

LV.—AN ACCOUNT OF AN ANCIENT MANUSCRIPT HISTORY OF HOLY CROSS ABBEY, CO. TIPPERARY, CALLED TRIUMPHALIA CHRONOLOGICA MONASTERII SANCTÆ CRUCIS. By the REV. DENIS MURPHY, S. J.

[Read, June 22, 1855.]

I BEG leave to submit to the Academy for inspection this evening a manuscript which has been lent to me. It contains two distinct works: the first has the title of *Triumphalia Chronologica Canobii Sanctæ Crucis*, Triumphal Records of the Monastery of Holy Cross. Bound up with this is another work, *Synopsis Nonnullorum Illustrum Cisterciensium Hibernorum*, a Catalogue of some famous Irishmen of the Order of Citeaux. The date on the title-page of the first is 1640; on that of the second, 1649. The whole makes up a small folio, measuring 12 inches by 8, containing 50 leaves of vellum. Of these, the first contains 38—4 of them blank; the last 12. The upper part of the first leaf is torn away, one half of another has dropped off piecemeal, as it would seem, and the edges of the whole are considerably frayed, more by damp than honest wear. The writing throughout is by the same hand, with the exception of a few lines recording the death of three Abbots who died after the above-mentioned dates. Both works are in Latin not of the purest indeed, yet such as shows that their author was acquainted not only with the works of the Latin Fathers but also with some of the ancient classics. The last chapter of the *Synopsis* contains a brief autobiography of the author. The title-page says he was a native of Waterford. At an early age he left this country and went to the Irish College at Lisbon. Having completed the study of humanities there, he sought admission into the Order of Citeaux. He received the religious habit in the Abbey of Palacuel in Spain. After passing some years in the study of divinity, he returned to Ireland to labour in the Mission there. He wrote some other works, biographies of members of his Order. The author of the *Bibliotheca Scriptorum Ordinis Cisterciensis* does not give the year of his death.

This manuscript was formerly the property and in possession of the monastery the history of which it relates. Harris, the editor of Sir James Ware's works, had it for a time, for he says in chapter xiv. of *The Writers of Ireland*, after giving the titles of the two works as above: "These two tracts were in the custody of the officiating Romish priest of the parish of Holy Cross, who did me the favour to lend them to me in the year 1733." He thinks they were intended for publication; but I should say they were meant rather as domestic records for future generations of the monks, that they might know the history of their house, and imitate the virtues of those who went before them.

Later it came into the possession of the Lanigans, for at page 31 we read: "17 Sept., 1810, Thomas Lanigan, dominus de Castlefogerty, hunc librum dono dedit Thomæ Bray, moderno Romano-Catholico Archiepiscopo Casseliensi." Dr. Bray was Archbishop of Cashel from 1792 to 1828. From him it has passed as an heirloom to his successors, and at present it is the property of the Most Rev. Dr. Croke.

The first work, the *Triumphalia*, begins with three short epigrams in elegiac metre. Next comes the *Censura*, or approbation of those to whom the book was submitted, to ensure that it contained nothing hurtful to faith or morals. Then the illuminated title-page; the dedication to Luke Archer, at that time Abbot of Holy Cross; an address to the "kindly reader;" and a preface, in which the difficulties met with in writing the work are set forth. Here, and frequently elsewhere throughout the book, the author speaks of an old Irish manuscript from which he took a part of his materials, and he expresses his regret that the first leaf, containing, no doubt, the early history of the Abbey, was lost. The work, properly so called, is divided into three parts. The first contains the history of the foundation and a narrative of some miraculous cures wrought by the Cross; the second, an account of a statue of the B. V. Mary, found off the coast of Clare after the wreck of the Spanish Armada; the third, a brief history of the other Cistercian Abbeys in Ireland. The first chapter, or *Illustratio* as it is called, gives the legend from which the ancient name originated, which is set forth so dramatically on the coloured title-page. It runs thus:—

"Where the Abbey now stands there was formerly a poor cell inhabited by a hermit. A party of four robbers, 'quatuor compares latrones,' wishing to put to actual test what they had heard of his holiness of life, used threats to him, and bade him give them his money-bags. The hermit assured them that he had nothing of the kind. 'Well, then,' they replied, 'let us see some proof of the truth of what is reported of you. Make that huge tree yonder bend down its top and touch the earth.' He warned them not to tempt God thus. They threatened him with instant death if he did not comply with their demand. And, behold! to their amazement, that huge tree bent down and touched the ground. They seized the branches, but they could not let go their hold as it rose up. Donnell Mor O'Brien, king of Limerick, happened to be passing by, and learning what had taken place, he cut off their hands as they clung to the tree, and so their bodies fell to the ground. Wherefore, to this day it is called in the Irish tongue Monaster Ochterlamhan, i.e. the Monastery of the Eight Hands."

That, as a fact, Donnell Mor O'Brien was the founder of this Abbey we know from the Charter still in existence in the Archives of Kilkenny Castle; it has been reproduced in the second part of the *Facsimiles of Irish Manuscripts*, edited by Mr. Gilbert. This is not the only memorial left us of Donnell Mor's piety, for we owe to him besides the cathedral churches of Killaloe and Cashel and the Monastery of Innislaught. The Four Masters say he died in 1194:—"Donnell,

son of Turlogh O'Brien, king of Munster, a beaming lamp in peace and war, and a brilliant star of hospitality of the Munstermen and all Lethmogha, died."

This was a time, too, when religious life sprung up afresh throughout all Europe, and especially in Ireland, after a long and dreary gloom. For more than two centuries, from 794, when the fierce sea-rovers from the north first set foot on our shores and plundered the shrines of Rathlin, to their defeat in 1014, our history is little more than a monotonous record of plunderings and burnings of churches and monasteries and of the slaughter of their inmates by these marauders. The Four Masters tell us "they were escorted with fire." And it was not merely the places along the coast that were devastated: Kildare and Armagh, Roscrea and Clonmacnoise, were ravaged almost as often as Aran of the Saints and Ross of the Pilgrims. No wonder that St. Bernard should say of Ireland in his time, that it heard the name of monk as something belonging to remote times, but it never saw one. Yet, for the three centuries that preceded these evil times, youths flocked to its monastic schools from the most distant lands, and its monks went forth as missionaries in vast numbers to found churches in almost every country of Europe. St. Bernard was one of those men who make an epoch. It has been said of him, that "no man during a lifetime ever exercised a personal influence like his. He was the stayer of popular commotions, the queller of heresies, the umpire between princes and kings, the counsellor of popes, the founder of a great religious order, the preacher of a crusade." His fame penetrated even to the far West, and Malachy of Armagh thought he could not consult better for the interests of his flock than by bringing among them some of the monks of Cîteaux, to leaven them by their teaching, and still more by the silent example of their virtues; and so they came and settled down in a quiet valley, as was their wont, for

Bernardus valles, colles Benedictus amabat,  
Oppida Franciscus, magnas Ignatius urbes.

Mellifont, the Fountain of Honey, was the first Monastery of the Order in Ireland, and within little more than two score years its abbeys and minor foundations numbered forty, none of them, indeed, equal in extent and beauty to Savigny, or Fountains, or Melrose, but perhaps by their very simplicity embodying better than these the primitive spirit of the founder of the Cistercian Order.

Donnell O'Brien's grant was confirmed by Henry II., John, and Richard. King John's charter runs thus: "Know you, that for the love of God and the salvation of my own soul and the souls of my predecessors and successors, I have granted and given, and by these presents do grant and give, to God and the B. V. Mary of the Holy Cross, and to the Cistercian Monks serving God there, in free, pure, and perpetual alms, the undersigned lands as fully and freely as Donnell O'Brien, king of Limerick, gave and granted, and by his Charter confirmed them to the Cistercian Monks of Holy Cross. . . . These lands

I have given for the salvation of my soul and those of my predecessors and successors and the souls of my soldiers who lie there." The goodwill shown by him and his successors to Holy Cross Abbey was something more substantial than a re-grant of these lands, for a considerable addition, probably the whole of the present transept and apse, was made by one or other of them to the buildings. Here is Hartry's account of what he calls the third rebuilding and endowment of the Monastery:—

"A certain Prince of royal descent, a son of a King of England, was very desirous of seeing the manner of life of the Irish. The King wished, too, that he should collect the Peter's Pence paid yearly throughout Ireland to the Supreme Pontiff at Rome. At his departure a ring was given him by his mother, which, if he needed her assistance in any way, he should send to her as a token. As he was passing through a wood two miles to the west of the Abbey he was met by one of the Clan Fogarty, and slain. One of the monks, old and blind, was three times bidden in a dream to go to a certain wood; there he should see swine turning up the earth, and close by he should find what would confer eternal renown on the Monastery. He paid no attention to the first and second visions, but after the third he rose early in the morning, and receiving the Abbot's blessing, and guided by one of his brethren, he set out for the wood. There he found the swine. His companion told him that a man's hand appeared over the ground, and on one of the fingers there was a ring. The blind man on the instant recovered his sight. He had the body brought to the Monastery and decently buried. Taking ship, he crossed over to England, and presenting the ring to the Queen, he told her the sad news of her son's death. In gratitude to him she promised to endow the Monastery as a memorial to her dead son. Moreover, she would crave from the King the Holy Cross given him by the King of France, and bestow it on him. The King at first refused her request, but at length he yielded to her urgent entreaties, and gave it to the monk. He set off in all haste with this treasure, took ship, and landed at Waterford, and made his way from thence to his Monastery.

"Who will say," he asks, "who that King was, and who the Queen? I have looked through authentic records, I have inquired into the traditions of the place, as handed down by the monks of the Monastery and by the inhabitants of the village close by born and bred there, and no one occurs to me more likely than Henry II., King of England, and Queen Eleanor, his wife, who, by common consent, and from the remotest times to this day, has been called 'the Good Woman.' She gave birth to six sons. Which of these our Prince was it is not for me to determine, nor do I find it mentioned by any author," He adds wisely to the above the saving clause: "with all respect for the judgment of my betters." History hardly bears out his statement in reference to Eleanor. The title of "the Good Woman" belongs rather to Matilda, the wife of Henry I., daughter of Margaret of Scotland, and grand-daughter of Edmund Ironsides. "She is distinguished,"

says Miss Strickland, "among the many illustrious females that have worn the matrimonial crown of England, by the title of 'the Good Queen,' a title which, elegant in its simplicity, briefly implies that she possessed not only the great and shining qualities calculated to add lustre to a throne, but that she employed them in promoting the happiness of all classes of her subjects, affording at the same time a bright example of the lovely and endearing attributes which should adorn the female character." All this was true in a great degree of her namesake too, the wife of King Stephen. But it would require more than the usual charity to predicate it of Queen Eleanor. Though historians commonly say that Henry I. had only two children, William, who was drowned on his way from Normandy to England, and Matilda, who married the Emperor of Germany; both Gervase of Canterbury and Robert of Gloucester make mention of a third, named Richard. But nothing further seems to be known about him. Unhappily, the dates cannot be well brought to accord with the previous part of our history, for Donnell O'Brien built the first part of the Abbey in 1168, and good Queen Maud was then just fifty years in her grave. I shall not discuss this matter further, but rather follow the example of Hartry, and "leave it to the judgment of my betters."

The tomb of "the Good Woman's Son" has long been a crux to Irish Antiquarians. Its beauty has added a special zest to the inquiry, for assuredly in Ireland there is no other work in stone, of what is called the pointed style, equal to it in graceful outline and accuracy of detail. The difficulty arises chiefly from the shields displayed along the soffit. These are five in number. The first is the cross styled of St. George, the arms of the Abbey, no doubt. The second, which is much larger than the others, contains the arms of England, as borne by the Sovereigns in the fifteenth and sixteenth centuries, *i. e.* France modern, and England quarterly. The third, the arms of Butler, a chief indented; the fourth, the arms of Desmond and Kildare, a cross saltire; the fifth is blank. Betham would have it to be the tomb of Joan, daughter and heiress of Gerald, fifth Earl of Kildare, and wife of James, fourth Earl of Ormonde, who died in 1430. Petrie at one time thought it was the tomb of Eleanor, daughter of James, third Earl of Ormonde, the wife of Gerald the poet, fourth Earl of Desmond, who died in 1430. She is styled by The Four Masters "a bounteous, truly hospitable woman." But he repented of this opinion afterwards, and said he had formed it too hastily. More recent writers, among them the Rev. James Graves, whose opinion on such matters deserves the highest respect, have cut the knot, and will not allow it to be a tomb at all, but assert and prove by examples found in many other Abbeys that it is the sedilia or seats for the clergy when officiating at High Mass. The shield bearing the royal arms of larger size, for honourable distinction, would betoken an Abbey founded or endowed by royalty; the Butler and Desmond arms would record the families of benefactors of special merit. As for the blank shield, I will only remark that, at Fountains Abbey, on the keystone of one of the original lancet win-



dows, there is an angel holding a shield of this kind. The meaning of it has not been explained satisfactorily. Its date is ascertained to be 1494.

It remains for me to say a few words on the relic of the Holy Cross from which the Abbey has taken its name. I have already given Hartry's account of its coming to this country. Can that account refer in any way to the piece of the true Cross which Robert of Gloucester says was sent to Queen Matilda, the wife of Stephen, by her uncle Godfrey of Boulogne, king of Jerusalem, and a portion of which she presented to her favourite Abbey of Fevesham? O'Halloran, who gives no authority for his statement, says Mortogh O'Brien received from Pope Pascal in 1110 a gift of a piece of the Cross covered with gold and ornamented with precious stones, and determined to found a Monastery for its reception. This he did not live to finish, but Donogh O'Brien, king of Thomond, completed it in 1169. Be that as it may, this Abbey was a favourite place of pilgrimage with the Irish in consequence of their belief that a portion of the True Cross was kept there. "The Suir," says Camden, "passes by Holy Cross, a famous Abbey heretofore, which makes the county about it to be commonly called the County of the Holy Cross of Tipperary, and hath derived to this tract certain privileges anciently bestowed on this Abbey in honour to a piece of Christ's Cross preserved there. . . . And it is incredible what a concourse of people still throng hither out of devotion." And Sir Henry Sidney, writing to Queen Elizabeth in 1567, speaks of "the Hollie Crosse, where there is no small confluence of the people still resorting." Carve, himself a Tipperary man, says in his *Lyra* that "this Monastery was the most famous of all Ireland, and that vast crowds used to come there as to a holy mountain." In 1600, when Tyrone with his army was going to the south "to confirm his friendship with his allies, and to wreak his vengeance on his enemies, he turned off his road to Roscrea and Templemore till he arrived at the gate of Holy Cross. They had not been long there when the Holy Cross was brought out to shelter and protect them, and the Irish presented great gifts and many offerings to its keepers and to the monks in honour of the God of the elements, and they gave protection to the Monastery and steward in respect to its houses and glebe lands and to all its inhabitants."

The cross was commonly kept over the high altar. At times it was taken down to be touched to sick persons who sought a cure. Often, too, it was carried about in procession. A coloured drawing of the procession is given at page 33 of the manuscript. The monks had it in their possession long after the dissolution of the Monastery. Hartry says they kept it in a rented house in Kilkenny, where they had established themselves until better times would come round and enable them to return to their Monastery. About 1632 it seems to have come into the hands of the Ormonde family. Walter, the eleventh Earl of Ormonde, styled on account of his devotions, as Dr. French tells us, 'Walter of the Rosaries,' handed it over to Dr. Fennell in

1632. The record of the trust exists still. It runs thus: "Whereas, out of the general trust and confidence I have, and do repose in Garrett Fennell, doctor of physick, I have delivered to his safe keeping a piece of the Holy Rood, to remain in his custody or such other as he shall permit, till such time as any of my succeeding heirs of the house of Ormonde shall profess the Catholic faith, and that it shall be delivered to my heir for professing the same, to remain as a monument in my house. And in case the Catholic faith do flourish hereafter in this kingdom, and it shall appear by pregnant testimony that my predecessors have the said piece but by way of trust and safe-keeping, for the use of any church, convent, or for any person; I do hereby upon my blessing enjoin my heir to restore the same as he shall see cause, and if no such cause shall appear, to leave it as a monument to my posterity." This document was signed by Earl Walter on his death-bed, for it is dated February 15th, 1632, and he died nine days after. Readers of the *Aphorismical Discovery* will remember that frequent mention is made in it of Dr. Fennell. He is said by the author to be "a kind of physician, a doctor of physick for Ormonde's house, and his follower." Obviously the reason why he left it to the care of Fennell was, that his heir apparent, Thomas, Lord Thurles, having been drowned thirteen years before on his return from England, his grandson James, later the great duke of Ormonde, became a king's ward and was brought up a Protestant. James, the great duke, seems to have transferred it to the keeping of one Valentine Smith, for there is still in existence an order of the second Duke of Ormonde, addressed to him, bidding him "to keep till further order from him the token left by Walter, Earl of Ormonde, for his family, formerly in the keeping of Dr. Fennell, which his grandfather afterwards put into the keeping of Smith." It bears the date of January 16th, 1691. There is a notice of the Smith family by Mr. Prendergast in the first volume of the *Kilkenny Archaeological Journal*. The grandfather of Valentine, William Smith, had come from Bristol, and entered the service of the Earl of Ormonde. In a grant of arms there is a certificate from the second Duke, stating that "the said William, Laurence his son, and Valentine, for a space of over fifty years did constantly demean themselves with great integrity and trust to the concerns of the Ormonde family."

The following document signed by Francis Moylan, bishop of Cork, and bearing the date July 6th, 1801, will tell who have been its guardians up to the present time: "We, the undersigned, by these presents do certify, that we have deposited in the Ursuline Convent of this city of Cork a portion of the Holy Rood which we received from Dame Mary Kavanagh, wife of George Butler, of Ballyragget, Esq., who received it from Dame Margaret Kavanagh, wife of Richard Galwey, of Kilkenny, Esq., with whom it was deposited by Dame Ellen Butler, sister of John Butler, of Kilcash, Esq., and wife of Colonel Butler of Westcourt, who received it from Valentine Smith, Esq." It is now in the keeping of the Ursuline Community, Black-

rock, Cork. Mr. Cooke erroneously states in the *Kilkenny Archaeological Journal* that the Archbishop of Cashel has it.

In conclusion, I beg to submit to the inspection of the Academy the manuscript itself, a duplicate of the title-page made by Mr. Harding, who intended to copy the manuscript, and got this drawing and some of the coloured initial letters done, but copied no more than two pages of the History itself; duplicates of the coloured drawings of the procession and of the relic on the altar, photographs of the Abbey of the tomb of the Good Woman's Son, and of a door-way leading into the cloister; the architectural drawings of the Abbey by Mr. Samuel Close, which earned the medal of the Society of Architects in 1868, and fac-similes of the two documents of the Ormonde family.

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LVI.—ON THREE BRONZE CELTS OBTAINED IN COUNTY MAYO, AND PRESENTED TO THE MUSEUM OF THE ROYAL IRISH ACADEMY, BY THE REV. J. M'PHELPIN, WITH OBSERVATIONS ON THE PROBABLE SOURCES AND USES OF SUCH IMPLEMENTS. By W. FRAZER, F. R. C. S. I., Member of Council of the Royal Irish Academy.

[Read, November 9, 1885.]

THE examples of ancient bronze celts which I am enabled to lay before the Royal Irish Academy reached me through the kind intervention of Rev. J. M'Phelpin, of Ballyvary, Castlebar. He procured them for our Museum from Miss Eleanor Flynn of Loughkeeran, to whom he requests our acknowledgments should be sent, and placed them in my hands for presentation this evening. In the letter that accompanies them he stated they were discovered a few months since in a field situated in the townland of Gallen, county Mayo. The locality where they were found is in close proximity to the well of St. Kieran, where large crowds assemble during the months of August and September to perform stations in honour of this early Irish saint. Mr. M'Phelpin further mentions in his communication that there is a large stone in the field about six feet high, four feet broad, and two feet wide. I presume these measurements relate only to the portion visible above the surface of the ground.

When examining these fine specimens I noticed certain interesting points which appeared to merit investigation, and induced me to submit the following remarks:—Leaving out of view in the present investigation the earlier rude chipped palæolithic implements of stone, which were unrecognized in Ireland until Mr. Knowles, by his recent explorations in the north-eastern flint districts, appears to have obtained important evidence as to their presence there, we start with that still remote period when a primæval race existed who fabricated stone implements with polished smooth surfaces. In the course of time, still at so distant an era that we cannot assign to it a satisfactory date within even approximate limits, either traders from abroad, or possibly an invading tribe of different origin, gradually introduced weapons made from bronze. It required a succession of years before these could have penetrated as they did every district of our country, for such extension must have been gradual and progressive, and does not necessarily imply the simultaneous or speedy disuse of stone implements. In Ireland, the examination of an extensive series of bronze celts, palstaves, spear-heads and other articles, does not enable us to concur with the suggestion (possibly true in other countries), that an age of copper preceded that of bronze. The causes of the apparent foundation for such a theory will be alluded to hereafter.

Bronze must have been employed during many ages, to be succeeded in turn by the use of iron; this innovation would seem to have occurred at a period within historic bounds for Ireland, and I believe long after it was well known on the Continent and in England. Some would assign a date of about 2000 years past for its introduction, yet it does not appear it can be fairly stated to have obtained absolute supremacy over bronze until the arrival of colonies of Danish settlers and of northern piratical fleets: let us say, at the earliest, in the sixth and seventh centuries.

The celt or chisel of bronze (a name-word derived from *celtis*, a chisel), is the legitimate representative and successor of our primitive polished stone celt, modified of course in shape in certain directions owing to the properties of the metallic alloy from which it is made; thus bronze possessed advantages enabling it to be cast much thinner, and with a wider cutting edge than the stone implement: still to a general statement such as this there are noteworthy exceptions, for whenever we pass beyond the boundaries of Ireland and visit New-Guinea, where stone implements continue to be fabricated and used, we obtain specimens of great beauty prepared from a tenacious greenish-coloured stone, so tough and hard that it admits of being ground considerably thinner than the finest bronze examples we possess, and having equally widespread cutting edges. We are enabled, however, in almost every instance to point out one important difference between celts fabricated in stone and those cast from bronze. In the bronze celt we invariably observe that the sloping sides which approximate to form the cutting edge are equally bevelled on both aspects, tapering with a similar degree of obliquity; but stone celts are with as striking regularity found to be polished in such a manner that the cutting edge results from the intersection of two curves of different degrees of inclination, and this observation holds true, not alone for celts of Irish manufacture, but for those of New Guinea, Australia, &c.: it is also seen, if we select for examination one of the primitive-looking instruments which are fashioned by the inhabitants of the Coral Islands in the Pacific Ocean from the great shell of *Tridacna*, who are obliged to rely on this hard material to supply the deficiency of rock or stone of sufficient tenacity. These people likewise employ such dissimilar lines of curvature to produce a cutting edge. It is true that a stone chisel or axe often of very large size, constructed after a totally different type, and shaped like the modern straight-edged cutting chisel which our carpenters employ, is ascertained to have been used over southern China, Burmah, and the north of India; and I have obtained from New Zealand an example of this widespread special form, referable to a race peopling those lands antecedent to the arrival of the present Maori population; whilst the comparatively recent implements made from New Zealand jade by the Maori approximate in shape, and in some degree in their curves, to our early Irish and the modern New Guinea types. It is interesting to observe how the primitive fabricators of polished stone implements discovered for themselves the

importance of employing such special lines of curvature to give strength and precision to a cutting edge; a fact of sufficient value to be rediscovered in modern times, and again utilized by the makers of the steel axe employed by American Backwoodsmen.

The acute powers of observation displayed in the selection by this primitive Irish race of appropriate rock material for making these celts, best suited to afford the hardest, sharpest, and most durable edges, attracted the attention of Professor Haughton, who ascertained their skill and knowledge of the geology of the rocks of Ireland was only surpassed by the ability with which they applied that knowledge to practical results. We can with justice claim for them in addition a familiarity with the solution of problems in mechanics to no trifling extent, whether they raised cromlechs requiring the removal of ponderous masses of stone, or ground down with infinite labour a fragment of basalt or hard trap-rock into these remarkable curves, and that the same race who erected the cromlech also ground the polished celts is beyond question.

What uses can be assigned with the greatest amount of probability to bronze implements of the chisel shape? In attempting an answer we must bear in mind they are often found buried in the earth in groups, in which case, as a rule, they are of different sizes, larger and smaller. In the present instance we ascertain three were discovered in close proximity, and from the splendid patination of their bronze surface they must have lain in the ground for many hundred years. We would require additional observations respecting the manner in which stone weapons continue to be employed by the aboriginal tribes who still continue to use them. We do know such stone implements are usually fastened to wooden handles, placed transversely and bound with firm ligatures. In Australia the natives use in addition a strong adhering resin derived from a species of *spinifex*, which becomes in the course of time as hard as the stone itself, but it is far from certain that our early Irish race employed their bronze celts after such a fashion; and as to the polished stone celts, some allege that they served much the same purpose as sling-stones, only being hurled by hand against an enemy; and this theory obtains support from certain passages in early legendary tales where such a practice is described, and the stone itself is termed the "warrior's stone;" clearly the bronze celt was too ponderous and inapt from its shape ever to be employed for a missile of this description. I fancy it was used to dig up roots, split rude planks of timber after the fashion of a wedge, which would explain the advantage and necessity of having a series of different sizes, a point otherwise difficult of being explained; also to cut down stems of trees, make dug-out canoes, possibly to hoe the ground, that it was utilized rather for every-day domestic purposes, and if ever employed in warfare, it was more through accident than design, and in the absence of weapons better adapted for that purpose.

The naturalist points out that with advancing development new organs appear, and differentiations of existing organs become mani-

fest—so in human civilization. In the earlier times few varieties of stone implements were found. The celt might vary in size within wide limits, but always follows a typical pattern; it is the sole universally diffused form of stone implement we have. Arrow-heads of flint are altogether restricted to the special districts where flints abound, or to contiguous districts: so are the rude scrapers and flint flakes, and we cannot correlate them with any special epoch: they appear to have been used in the earliest times, and certainly continue to be manufactured to the present day after the same rude process employed originally. Of course they are no longer used for the chase or battle, but supply a considerable demand on the part of tourists to the Giant's Causeway, and coast of Antrim, who wish to carry with them, particularly to America, undoubted specimens of our "flint antiquities." For this purpose they are made in hundreds. No sooner does bronze take the place of stone than we notice a wide difference: the celt, the palstave and its many varieties; the dagger, sword, spear, &c., all point to special ends for which they are designed. It is a fair subject for conjecture that our stone-using race, like the present Australians, may have employed various skilful adaptations of wood, &c., which have perished, and when examining recently the ethnological collection brought back by Mr. Hardman from a geological excursion to Kimberley, N. West Australia, this appeared to me to be quite within reasonable conjecture. The aborigines, he informs me, will cut down trees nine inches in diameter with their stone implements, and also apply them with much skill to form notches in the bark of trees for the purpose of climbing the stem, placing their great toes in the notches of the rude ladder thus formed.

A similarity of composition, within certain limits, distinguishes all our ancient bronzes. This alone would point to some primitive common origin, and the essential components being limited in the earlier ages to copper alloyed with a considerable proportion of tin, the latter constituent of necessity limit that origin to the few districts where sufficient tin abounds: with us it points beyond doubt to a foreign and extraneous source, for the amount of tin obtainable in Ireland is insignificant. Again, weapons of bronze similar in their composition and general design are found scattered over wide districts in Europe: these could not for a moment be supposed to have originated here, whilst it is quite reasonable to ascribe our supplies to an overflow from the Continent. Unlike stone weapons, which each tribe or individual could fabricate for themselves; bronze implements are the obvious result of some organized manufacturing process. Many concurrent reasons render the conjecture more than probable that they reached our shores, through indirect channels, from the Mediterranean, possibly through Phœnician or Cyprian colonies in Spain or southern France, as Marseilles, &c., which were recognised trade centres from a very early age. Whenever weapons fabricated from bronze had arrived in sufficient quantity, they could, if broken or damaged, be remelted and recast without difficulty, and that this was done at least

to some extent is beyond question, for the moulds themselves for preparing such bronze castings are to be found in our Museums. Great numbers of beautiful leaf-shaped swords, a shape common to such distant lands as Ireland, Italy, Greece, and Asia Minor, are discovered from time to time, those obtained from tombs having usually been broken across before being deposited. This we must assume was a special funereal custom, and to it we owe the preservation of many fine specimens. The practice of burying sword or dagger with the dead indicates the estimation these weapons were held in, and points out the need that must have arisen for continuous extraneous supplies.

The principal reason which induced me to bring these three celts before the notice of the Academy is to direct the attention of Archaeologists to numerous oval, almost linear indentations, or superficial markings, noticeable on the surface of all three specimens, and displayed with peculiar distinctness on the one which is best preserved. I am led to conjecture we have in these and similar superficial markings something equivalent to the trade marks of our British merchants; and when we investigate minutely the great collection of bronze celts preserved in our own Museum, I fancy we will recognize other celts from the workshop of the same maker, or, shall I say, possibly referable to the same art school. If this supposition could be verified, it would afford decided advance towards clearing up the Art History of these and similar objects, and we might by their assistance reach a position enabling us to trace them backwards along definite trade routes across Europe, and possibly discover the commercial centres whence our bronzes were originally obtained.

It becomes indispensable to examine large collections, such as ours, to obtain any adequate degree of information respecting the extensive variety of superficial markings and ornamentations with which bronzes are decorated. We would require to consider, in addition, the varieties of patterns employed, with their special modifications, such as the diversified lines of curvature introduced into them, and the dispositions of the secondary ribbings, which are no less important than the decorative ornamental surface work. All these differences fall into certain minor classes of groupings, and suggest to me that the original manufacturers of such articles of bronze did not employ diversified forms of ribbings and deviations in patterns after an arbitrary or purposeless fashion, or for ornament alone to gratify the whim of the fabricator, or the vanity of its future owner, but that we find in those markings, provided we could succeed in decyphering their meanings, the record of a line of ideas in the mind of their makers, similar and parallel to the mason marks employed by the builders of antiquity, in ages so remote as the building of the Pyramids, and practised even so late as the erection of our British cathedrals; or, to use a familiar illustration, analogous to those varieties in pattern and ornamentation placed upon different classes of china and pottery throughout all ages and all countries, which are still recognizable, and utilized to afford the best available means of classifying them.



I venture further to put forward, based on careful scrutiny, and therefore capable of better support than mere conjecture, the statement that these decorative and other markings should be interpreted as evidences of progressive efforts at improvement in the workman's art, and not regarded as mere secondary modifications in details. In this statement I would lay special stress on these constructional variations of form, ribbings, &c., which are recognizable when we inspect any extensive series of bronzes; they give us a clue worth unravelling by which we may obtain, at least, some approximate classification of the successive stages of development in bronze castings possibly extending over many centuries.

A similar line of evidence is accepted by the numismatist when endeavouring to classify the first rude attempts of the earlier primitive coinages in metal; and we must hope that a mode of investigation which has afforded good results in the one case will not altogether fail us in the other. It requires wide and patient research, not only as to our own bronzes, but also those of other countries, especially on the Continent, before we can hope to obtain the material for definite generalizations. Some day their study will explain away our present difficulties, and clear up the questions as to both the race and age when bronze became discovered and utilized, and also the interesting inquiry I have ventured to indicate—Who were the great pioneers of trade and civilization by whose efforts bronze implements were spread through every district of Ireland, and equally important, demonstrate the varied stages in the progressive development of this special department of art manufacture. I have already mentioned, that whatever may be the case elsewhere, in Ireland at least there are no satisfactory reasons for the so-called bronze age being separated into two subdivisions—that of red copper and of true bronze. It is quite possible certain red copper daggers may be older than many cast in bronze, but the reverse holds equally true. Copper celts, for example, are often obtained of rude fabrication, the result of coarse workmanship and of unskilful workmen. We know when the best bronze is remelted, under such circumstances it will part with its tin, and if remelted frequently or without proper precautions, the removal of this oxidized tin will leave behind a residue of copper in a condition of more or less purity.

I will conclude with a final suggestion about the tempering of our bronze implements, a matter on which various opinions have been advanced—some explaining it by a process of hammering of which there are no traces on the weapons themselves. Many of our leaf-shaped swords and daggers of bronze have keen cutting edges almost as perfect and sharp as those now made from fine steel. One of the results of modern chemistry shows that a peculiar compound obtained by uniting phosphorus with bronze possesses in an eminent degree the property of extreme hardness, on account of which it is utilized for forming the bearings of heavy machinery, steam carriages, &c. May not our bronzes have received their fine tempering by being annealed in the ashes of turf or peat, which afford a remarkable amount

of phosphoric compounds, similar to the process by which iron is converted into steel when long heated in charcoal? We are yet unable to test the presence of phosphorus under such circumstances in bronze even with the assistance of a spectroscope, but when advancing chemical science enables us to recognize phosphorus in minute proportions in metallic compounds, we will be in a position to determine how far this surmise is correct.

The remarkable patination of one of these celts deserves more than a passing observation; it is seen in a state of perfection that is of exceptional rarity in Irish bronzes, and should be preserved in this condition. Many of these specimens reach our collections seriously injured by attempts at cleaning, and even after rude filing, or the application of acids, which utterly destroy much of the interest attached to them as objects of antiquarian study. It is unusual for bronzes in this climate to approximate to such a brilliant lustre as we observe in this specimen, and indeed we have not in the Museum of the Academy one of equal beauty.

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LVII.—ON SOME SIXTEENTH CENTURY INSCRIPTIONS IN LEIGHLIN CATHEDRAL, CO. CARLOW. By JOHN RIBTON GARSTIN, F.S.A., M.R.I.A.  
(With Plates XX & XXI.)

[Read, December 8, 1884.]

WORTHY "John Weever" [it was a *nom de plume*.] published in 1631 his work, entitled "Ancient Funerall Monuments within the United Monarchie of Great Britaine, Ireland, and the Islands adjacent," but Ireland found no place in his 871 pages, which, in fact, relate only to four English dioceses. Nor did any other writer supply what Weever omitted for Ireland, and such monumental inscriptions in this country as have been printed (except those in the Irish language, which Miss Stokes published in a collected form) have to be sought in several disconnected books.

The inscriptions in the ancient, but unpretending cathedral at Old Leighlin, in the county Carlow, were indeed known to Mr. John Ryan, who, in 1833, published a history of that county, but though he had the will he lacked the skill to decipher those which are the subject of this Paper. I am assured by persons familiar with the antiquities of the neighbourhood, that no full account of them has appeared in print since Ryan's time.

[I have however learned, since this Paper was read, that an accurate notice of one of these inscriptions—that of 1569—was laid before the Academy by J. Huband Smith, Esq., M.R.I.A., some years ago (see *Proceedings*, vol. iii. p. 729), and an account of them has been published by the Rev. Denis Murphy, S.J., M.R.I.A., in the *Irish Ecclesiastical Record* for May, 1885, while this Paper was awaiting publication.]

A few weeks ago rubbings of some of these inscribed tombstones at Old Leighlin were taken, and forwarded for presentation to the Academy by Colonel Philip D. Vigers, a gentleman whose family has long been seated in the neighbourhood, and has given to Leighlin a bishop and a dean. They were accompanied with descriptions, including the readings of the inscriptions, so far as they had been deciphered by Ryan in his county history. Colonel Vigers himself succeeded in adding to the very meagre and misleading readings given by Ryan; but one of his motives in presenting these fac-similes to the Academy was that the portions still obscure might, if possible, be deciphered and translated. In compliance with a suggestion of the President, I undertook to examine the rubbings, and this Paper is the result of the investigation.

Three of the tombstones present features of special interest, deserving the attention of those interested in Irish archæology and history. They are similar in size, general form, and design. The inscriptions

on all are in Latin, and in black-letter characters in relief. But few capital letters are introduced, and those apparently without any fixed rule, save that they generally commence Christian names. They are of the form commonly styled "Lombardic." A "Calvary" cross "flory" occupies the centre of each stone, and round it the inscription in each case runs, facing inwards, and turning in a kind of square spiral (Plates xx. and xxi.).

One of these stones is the common monument of two of the bishops of Leighlin. The two other stones commemorate each, respectively, an "O'Brin" who married a Cavenagh. First in time and in historical importance is the

#### TOMB OF BISHOPS SANDERS AND FILEY.

Ryan describes this as in the chancel of the cathedral, part of it being "improperly covered by the wooden steps of the communion table." It is now on the floor, about ten or twelve feet from these steps.

The inscription commences at the upper end of the tomb, near the top of the cross. The words are seldom separated, but such breaks in their sequence as occur are indicated in the following copy by upright lines (see fig. 1 in Plate xx.):—

hiciacet | Oatheus | sandersepulchrlinenqui |

obiit xx | iii<sup>o</sup> die decembris a<sup>o</sup> d<sup>i</sup> |

ccccxlxxv[rai]e deuspropi | tiet<sup>o</sup> am | en.

In the centre of the cross is the monogram:—**iſc**, in an octagon, the final s being, as usual in similar and earlier examples, in the form of t.

In the middle of the cross are the sunken spaces or "matrixes," evidently once occupied by two brasses, also commemorating Bishop Sanders, and the marks of the rivets by which each brass was fastened still remain. From the form of the upper vacant space it may be safely inferred that it represented the bishop in mitre and crozier; and the lower one, oblong in shape, doubtless contained an inscription. The loss of these is to be deplored, as mediæval monumental brasses are extremely rare in Ireland. A note on the few existing will be found in the *Kilkenny Arch. Jour.*, vol. ii., p. 78.

Weever, in his quaint preface, laments how in England epitaphs were "broken down and almost all ruined, their brazen inscriptions erased, torne away, and pilfered, by which inhumane deformidable act the honourable memory" of many persons is extinguished.

At the foot of the space formerly occupied by the lower of the

missing brasses are some letters or figures belonging to the original inscription, rudely carved, somewhat as follows:—

XXIII DE EE  
RIS XL IX MB

Along the space once occupied by the brass representing Bishop Sanders, a later inscription in similar, but smaller, characters was added. It occupies a single line, and is as follows:—

**Thos filay · eḡs · leghlġn ob · 1567.**

Though the inscription presents no difficulty to anyone familiar with the like, Ryan only read five words correctly, and he fell into the serious error of assigning the date 1567 to Bishop Sanders, instead of to Bishop Filay, whom he ignored.

In plain English, the record runs:—

“Here lies Mathew Sanders, Bishop of Leighlin, who died on the 23rd of December, 1549: To whose soul may God be gracious. Amen.”

The “disjecta membra” which figure about the base of the cross might baffle even those familiar with the vagaries of mediæval stone-cutters. They were probably intended to be somewhat cryptic; and if the object was to puzzle posterity, assuredly it has been attained. Nevertheless the solution seems simple. If read as three lines, the MB, being taken as line 2, it yields:—XXIII DECEMBRIS XLIX.—a repetition, in abbreviated form, of the date of Bishop Sanders’ death. By a curious coincidence, exactly a century later, the same year-date abbreviation was used in the appellation of the “’49 officers.”

The second inscription on this stone simply stated that—

“THOMAS FILAY, BISHOP OF LEIGHLIN, DIED 1567.”

It may be worth observing, in reference to the characters used—firstly, that in the date in black-letter (as is the case in the other inscriptions to be noticed presently), instead of the letter D being combined with M to indicate one thousand five hundred, five C’s are used for the purpose; secondly, that as Bishop Filay’s date is given in Arabic numerals, it may be assumed that they came into fashion in tombstone epigraphy in Ireland between 1549 and 1567. This transition is well illustrated by the Power inscription in St. Canice’s, Kilkenny (Graves and Prim, p. 178), where the date is mcccc83—both forms of numerals being combined. The first instance of the use of Arabic numerals in England is in a brass of 1481, at Rougham, in Norfolk, mentioned by Cotman; thirdly, the C in the “Decembris” of the abbreviated date is not curved, but distinctly square in form, in fact a modern E bereft of its central stroke. This type of C will be

found in the inscription on the Ardagh Chalice (see *Transactions*, R. I. A., xxiv.), and is interesting as supporting the theory that the Roman numeral L = 50, was adopted as being the half of the C (initial of centum) = 100, just as the D = 500 is half of the Lombardic M (initial of mille) = 1000, and X is the double of V, or conversely. Fourthly, in the "Epus" and "propicietur" some peculiar letters occur, namely, the E, which resembles the Greek ε with a closing stroke; the O, which is just like a modern capital D; and the four P's, which are modern in shape.

There are special reasons why these inscriptions are of consequence towards determining the order of succession in the See of Leighlin. To render this intelligible it will be necessary to notice shortly the history of the bishops in question.

After the brief and tragically-ended episcopate of Maurice Doran, murdered in 1525, Matthew Sanders, who was born near Drogheda, succeeded to the See of Leighlin, which he held for thirty years. Dr. Brady (*Episcopal Succession*, Rome, 1876, i. 386) cites from the Barberini Archives the memorandum of his appointment in consistory by Pope Clement VII., on the 10th of April, 1527, with certain dispensations as to retaining his benefices. There seems to have been delay as to his consecration, for two years later he is described (*ibidem*) as "Electus Leighlinensis," 27 June, 1529. Ware says he was consecrated in 1527. Whether he favoured the Reformation has been a subject of controversy. It is recorded of him that "he new built the choir of the Cathedral of St. Lazerian, Leighlin, and also made and glazed the south window."—[*Wars.*]

Ware is explicit as to the date of Bishop Sanders' death and his place of burial, which he twice records. In the *Annals* he says, A. D. 1549: "The twenty-fourth of December, Matthew Sanders, Bishop of Leighlin, died, and was buried in his own church (the choir of which he built a little before), and has a monument over him." In the *Bishops*, he gives the 14th of December as the day of his death, and says he is buried "under a Marble." His tombstone is of the black stone, so designated in Kilkenny. It will be observed that these dates neither agree between themselves nor with the date (December 23rd), twice recorded on the tombstone, though the diversity, being a matter of days—or a day only—occasions no serious difficulty, and indeed rather corroborates the fact of the year they concur in being the correct one.

Now, it is remarkable that, as it is put by the Rev. M. Comerford in his "Collections relating to the Dioceses of Kildare and Leighlin" (Dublin, 1883), p. 56—

"In 1541, it was reported at Rome that Dr. Sanders was dead, whereupon Thomas Leverous was appointed to fill the supposed vacancy." [Here he quotes the Papal provision of 14th of November, and adds]: "It would appear that he was even consecrated for this See from his being styled 'heretofore Bishop of Leighlin'—*Olim Episcopus Leighlinensis*—in the official record of his appointment to Kildare in 1555."

In Gam's "Series Episcoporum Ecclesiæ Catholicæ" (4to, Ratisbon, 1873), a work of great repute, Field (or O'Fihel) appears next after Sanders, and though his death is dated 1549, and Field's provision is in 1555, no bishop is noticed as having sat in the six intervening years.

According to Ware, however, who is followed by Archdeacon Cotton (*Fasti Ecc. Hib.*, ii. 387), Robert Travers succeeded on the death of Sanders, and was consecrated in 1550. He was appointed by Edward VI., but was deposed five years later, on the accession of Queen Mary, because he had married. Thereupon the See was filled by the appointment of the other bishop named in the inscription under consideration. His name appears in a great variety of forms. In the Barberini records (Brady, ii. 187, i. 386), it is given as Ofigillan and Offilay. Thady Dowling, who was contemporaneously Chancellor of Leighlin, in his *Annals* call him Fylay (not Filey, as quoted in Comerford), *alias* Fighill. Ware and Cotton give his name as Field or O'Fihel. Gams follows them. Comerford names him O'Fihely or Field. In the *Annals* of his Order he appears as Fihely; and in a memorandum printed in Shirley's "Original Letters," &c., p. 93, he is styled "S<sup>r</sup> Thomas ffyllye, Bisshop of Laughlyn." He is also possibly the Bishop Ophily (erroneously? called William), named as predecessor of Francis de Ribera on his appointment in 1587.

These variations of spelling, doubtless, do not indicate any substantial difference, but illustrate the unsettled orthography of the times. To the eight forms of the name above recounted, the inscription, which is probably as good an authority as any, adds one more, namely, Filay.

Bishop Filay, who, according to Ware, was a native of Cork, was a professed member of the order of St. Augustine, Rector of Delgany, diocese of Dublin, and Abbot, "Monasterii Sti. Agustini, Mageonen.," when, 15th Jan., 1547, the Pope appointed him to the See of Achonry—a fact not known to Ware, Harris, or Cotton, but which Dr. Brady's researches brought to light. He was allowed to retain his monastery of Mageo—which, as neither Brady nor Comerford identifies it, I may note, on the authority of the Rev. Denis Murphy, S.J., M.R.I.A., was Mayo of the Saxons, near Claremorris, and not to be confounded with the Cistercian foundation "de Magio," or Monaster-Nenagh, Co. Limerick. (See Grace's *Annals*, I. A. S., Appendix, p. 169, and Lady Dunraven's *Memorials of Adare*.) His translation is commemorated by Herrera, in his *Alphabetum Augustinianum*, p. 430. According to Dowling, he was a Franciscan. As to this, see Comerford and Moran. The question whether he conformed at the Reformation has been a subject of controversy, but that topic is outside the scope of this Paper.

The date of Bishop Filay's death is not free from doubt. Thady Dowling fails to record it. Ware (in the English edition of 1704-5), states explicitly:—"He died in 1557 [an evident misprint for 1567], the Friday before Palm Sunday [*i. e.* March 21st], having sate about twelve years, and was buried in the same tomb with his

predecessor Sanders." Mr. Comerford (p. 58), speaking of this bishop, says, "that in the annals of his order he is mentioned" . . . . "up to the time of his death in 1566;" and Mr. Shirley corrects Ware's date to 1566, on the authority of a letter (which he prints in "Original Letters," p. 247) from Sir Henry Sidney, Lord Deputy, to the Lords of the Privy Council, dated "At Kilmaineham the 18th of May, 1566." It runs :—

"At my late returne out of my journey made in Leinster, I understode of the deth of the late incumbent in the Bisshopricke of Laughlyn, to whose place and office I have bene earnestly entreatid to comend one Daniel Cavanaugh, a gentleman of those parts, and a professor of Divinity," a member of the chapter of Laughlin, and one "enabled by the welth and strength of his frends in those parts to be a good servaunt to the Queene for the preservacon of Justice, whereof that countrey hath great need."

On the 10th March following, 1566–7, Sidney renews the request (O. L., p. 292). Accordingly, Cavanagh was appointed, and as the Queen's Letter for his appointment is dated 10th April, 1567 (Shirley, O. L., p. 298), and he was consecrated in that year, the date on the tombstone seems to be erroneous. For particulars as to the history of these bishops, see, beside the authorities quoted, Dr. (now Archbishop) Moran's "See of Leighlin in the 16th Century."

#### THE TWO O'BRIN (O'BYRNE) AND KAVANAGH TOMBS.

I proceed in the first place to give the text of the inscriptions, as to which no controversy is likely to arise, for they are in such good condition as to be quite legible. I shall then give the translation simply, reserving for subsequent consideration any questions arising thereon. After which I shall add some remarks on the persons and places, &c., mentioned.

I.—*Inscription of A.D. 1555* (see fig. 2, Plate xx.).

ih̄c | hic ia | cet m'c Iohannes mutus filius Willelmi  
 filii dauid rufi pbram et eius uxor Mabella chauanahg  
 filia donati uilbinonēis quōm aiābus propic | iet | urn  
 deusamen | anno domini mī.ccccc.l.v obois. oēs qui.  
 transitis | rogo mī, memores scitis fuimus quod estis  
 fue | ritis | aliquando quod sum;

This being translated, runs :—

"I.H.S. Here lies Mr. John, dumb (or only?) son of William Fitz-david Roe y'Brain and his wife Mabella Cavanahg, daughter of Donogh of Wilbinon (?), on whose souls God have mercy. Amen. Anno domini m.ccccc.l.v."



Then follows an exhortation to the passer by, on which I shall have something to say presently.

II.—*Inscription of A.D. 1569* (see fig. 3, Plate xxx.).

hic | hic Jacet | Willellimus obrin filius momi nati filii  
 Willelmi filii | dauid rufi G[ene]rol<sup>s</sup> de | Corralloski[.]t  
 ballenebrenagh ac burgēsis | ueteris | Leghlenie | obiit  
 xvii die mēsis Junii Ad m<sup>o</sup> | cccc<sup>o</sup>lxi<sup>o</sup> | et eius | uxor  
 Winna Kewanagh filia Maurici | filij donati | uilbinonesis  
 ij obiit—die | mēsis—Ad m<sup>o</sup>cccc—Corū aīab ppici | etur  
 des Amen

This reads in English :—

“I. H. S. Here lies William O’Brin, son of Ferganaim (or of ‘nameless’) son of William Fitz David Roe, Gent., of Corranloski and Ballenebrenagh, and burgess of Old Leghlin. He died on the 17th of June, A.D. mccccclxi. And his wife, Winna Kewanagh, daughter of Maurice Fitz-Donogh of Wilbinon (?), who died on the — of —, A.D. mcccc—. On whose souls God have mercy. Amen.”

Owing to the interchangeable nature of the black-letter characters, the want of word-division, &c., there is some uncertainty as to the force of some words in the original, which I will mention seriatim :—

In No. 1 (a), the fourth word, before Johannes, is like *hic* repeated, and so Ryan reads it, but that is unmeaning. I read it *m<sup>t</sup>*, which would be, and was probably meant by the carver for, ‘Mac. But, as no Christian name precedes it, that seems out of place, and I submit that the *t* is to be deemed an error—one of many—for *t*, and that we have an early form of our modern “Mr.,” an abbreviation of Magister, which, in the form of “Master,” was commonly used as an appellation of dignity in the Elizabethan period to which these monuments belong, and of which traces are found even in Roman inscriptions, as may be seen in *Hubner*. Mention of two persons of this very name, “William and Arthur Mac Bryn, sons of Master Arthur Mac Bryn,” occur in a grant of Primate Sweteman, A.D. 1365 (Elrington’s *Usher*, xi. 436-7, quoted in King’s *Primacy of Armagh*, p. 39: see also p. 40).

In No. 1 (b), the next word after Johannes unquestionably reads—as Ryan has it—*mutus* = dumb; but, considering that as the letter *i* in these inscriptions is usually undotted, so that this criterion

is wanting; and considering also that *t* and *ç* in the writing of the period, as well as in the black-letter, were, as also in sound, almost identical—a fact which explains the still unsettled mode of spelling such words as “ancient.” I must not disregard a suggestion of Professor Atkinson that the word in question was intended for *unicus*, = only (son), which seems more probable. The more difficult literal reading, *mutus* = the dumb (or at least stuttering) son, is not, however, without support. The Rev. Denis Murphy has obligingly referred me to Morrin’s *Rolls of Chancery* (i. 178), where, under date 24th June, 1548 (3<sup>o</sup> Ed. VI.), a pardon is issued to “John Ballaghe O’Byrne of Ballyvane, co. Carlow, horseman,” who, he thinks might be the same person, “the *ballaghe* being put for *balb*—a mistake of the guttural sound by the writer of the pardon, like Barrogh for Barrow, Barba.” It is remarkable, however, that five other persons are named in this pardon, and that the name or epithet is applied to each.

In No. 2, the two words after “Johannes,” or rather one divided in two, which reads *monn nati*, presents much difficulty. I believe that we have one word *inominati*. With this conjecture the Rev. James Graves agrees. He reads the word as a proper name of the father of William “O’Brin,” viz. “Inominatus;” and he adds, “There is a well-known Irish name ‘Ferganaim’ = ‘*vir sine nomine*,’ which means ‘inominatus,’ or nameless. . . . It was common amongst the Kavanaghs.” See a note of O’Donovan to the *Four Masters*, A.D. 1541. With this agrees Mr. Huband Smith, who gives instances from some records.

Dean Reeves has kindly referred me to the Calendar of Patent Rolls, 503, in 17th Rep. Irish Record Office, p. 82, where appears a pardon to “Wm. m<sup>c</sup> Fergananim O’Birne, of Co. Carlow,” 31st Aug., 40 Eliz., but that date being 1598, it can scarcely refer to the subject of the epitaph of 1569.

Should anyone be unwilling to accept the reading “Ferganaim,” I have also to suggest that the explanation may be found in a reference to the other tomb, and that the word means, “named in—*sc.* the other inscription.” This would be quite consistent, as a reference to the two inscriptions, as before given, will show. It may be argued as against this, that these two monuments are not near each other, so that such a reference would be too vague. But, as Ryan records, “this monument was pulled in pieces by the deluded rebels of 1798,” so it is probably not now in its original position.

In Nos. 1 and 2, the local epithet, *uulbinonensis*, applied in both inscriptions to the Cavanaghs. It means of some place named Wilbinon, or such like. If the three first letters = *vil*, we may read, “of the town of Binon,” or, as Mr. Graves has it, Dinon. In the map of the Barony of Idrone (*Kilkenny Arch. Jour.*, 4th ser., i. 187), the only name like the one desiderated on is Tulmoyonniss. Mr. Murphy thinks the place in question is Polmonty or this. Failing local identification,

I hazard the conjecture of a mis-writing for Vill-burgensis = Burgess of the town (of Old Leighlin), as occurs elsewhere on the tomb.

On the south side of the altar-tomb of William O'Brin is carved a shield, bearing the upper portion of three animals—"two and one," as the heralds say—probably intended for demi-lions, but more resembling foxes "rampant," and "couped"—their tails escaping in the operation. Above this is the name

. . . . . Brpn

to the left, turned upside down, with a blank space before it unoccupied; possibly intended for a Christian name.

Now it is curious that, according to Burke's *General Armory* (1878 ed.), the Byrnes and O'Byrne arms, as borne by the notorious chieftain Fiach M'Hugh O'Byrne, chief of the name *temp.* Elizabeth, and the Cabinteely and Wicklow Byrnes, were: a chevron, between three dexter hands. I have before me a woodcut of "The Byrns' Arms," in Francis-street, Dublin, where was the drinking "Spaw," figuring in an advertisement thereof in the Public Gazetteer of March 24-8, 1761, which exhibits the three hands separated by the chevron, surmounted by the mermaid crest as assigned to all the same families.

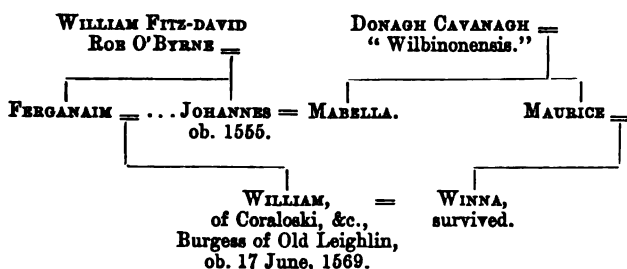
On the other hand, all the O'Briens, from the monarch who fell at Clontarf to the Thomonds and Inchiquins, bore three lions, but they were "passant guardant," and "in pale," that is at full length, one over the other. In fact, the nearest resemblance in name and bearings in the *Armory* to the arms on the Leighlin tomb is in the coat assigned by Carney, Ulster, in 1684, to James Brien, viz., "Gu., three lions, passant, two and one, or." But these were passant; so the question as to which family the arms at Leighlin belonged must remain in abeyance.

Having thus tried to establish the sense of the inscriptions, something must be said about their subjects.

In the first place, one naturally looks for the family or stem-name. We find in these inscriptions, besides many Christian names, two such surnames, each given in two forms, different in spelling, but really identical, viz. y'Brian and O'Brin, with Chavanagh and Kewanagh. The prefix *y* in the former represents the Irish *Ua* or *U*, and was superseded by the modern *O'*. (See Reeves, *Ecc. Ant.*, 370.) In the second couple the beginnings and endings vary, but the name is one, *hodie* Cavanagh. The form Kewanagh is frequently found in contemporary writings. The transposition of the final *g* and *h* may be for phonetic reasons. The former coupled names might be supposed to be the Elizabethan form of O'Brien; but, apart from Dr. Joyce's assurance, which in itself would suffice, we have conclusive evidence that the family described is that of the O'Byrnes, which, with the Cavanaghs, were the most numerous and powerful clans in the neighbourhood of Leighlin. An example of the name O'Birn, or O'Byrne,

being spelled O'Brin, will be found in Ware's *Bishops*, where Malachias, Bishop of Kildare, who died 1176, is so designated.

The persons named were all related. The two O'Byrnes were, apparently, uncle and nephew, whose wives, both Cavanaghs, were aunt and niece to each other. Thus we are enabled to construct three generations of the pedigree of both families, as is here shown :—



The epithet red = Rufus = Roe, applied to William O'Brin, was one in common use. Though each inscription is in memory of husband and wife, each contains but a single date, namely, 1555 and 1569. In the former case it is doubtful whether the year, which alone is given, refers to both husband and wife, or the survivor. It may be that of the monument. In the latter case the name of the wife, or rather widow, was evidently put on the tombstone during her lifetime, blanks being left after the word *obit* for the day, month, and year, the intention being that the dates should be filled in at her death—a plan by no means unusual in mediæval times. There is a good example at St. Canice's, Kilkenny, and I could mention several modern instances.

Those who desire further to investigate the genealogy can consult "Historical Reminiscences of the O'Byrnes, O'Tooles, O'Kavanaghs, and other Irish Chieftains," by O'Byrne, which was privately printed at London, 1843, 8vo. Also Daniel O'Byrne's "History of the Queen's County" (Dublin, 1856), which promised, in a History of Wicklow (never published) a fuller account of these clans. The Cavanagh Pedigree will be found printed in "Burke's Landed Gentry" (abridged), and in the *Kilkenny Archæological Journal* of July, 1856. Notices of the family will also be found in Hogan's "Description of Ireland in 1598." Next in interest to the persons named are the places.

Of Old Leighlin—so called even before the sixteenth century, to distinguish it from Leighlin-bridge—little need be said. The Cathedral is described by Ryan (p. 343), and of the city not much is memorable. Carew, whose collections, now at Lambeth, afford such a store of history of the government of this country, owned property near this, and lived on it occasionally. It returned two members to the Irish Parliament (Sir Boyle Roche's name being almost the last,

as well as the most notable on the list). The city is now a poor village of about twenty cabins.

As one, at least, of the O'Byrnes named in the inscription is described as a burgess of Old Leighlin, it should be noted that that designation conveyed more than the ordinary meaning of citizenship. In the thirteenth century Bishop Harlewin bestowed burgages, or dwelling-houses, on the burgesses of Leighlin, accompanied by a grant of the franchises of Bristol, reserving to his See a yearly grant of 12*d.* out of each burgage.

The liberties extended about a mile and a-half round the town, and were defined by large boundary stones, inscribed, "*Terminus Burgens. Leighlinen. hic lapis est*" (Ledwich), some of which are still extant. The name "Burgage" still survives as that of the seat of the Vigors family.

The other places mentioned are Ballenebrenagh and Corraloski. Ryan says they were in the immediate neighbourhood of Leighlin. The former will be found indicated on the O. S. Map. Mr. Vigors tells me it "is a townland about three miles north of Old Leighlin, and the name is in every-day use. Corraloski," he adds, "is not so certain, but one of the oldest men living at Old Leighlin told me that there was a place known as Craanloski, adjoining the Ballenebrenagh above-named, and between it and Old Leighlin." In the Idrone map, before referred to, appears the name Caronloss, about midway between Leighlin and Carlow, on the Kilkenny side of the Barrow, about two miles from the river.

The name rather resembles Cloaghruish, between which and Killebane, at the head of Glan Reynald, near Leighlin (as is recorded in Dowling's Annals under 1522), Maurice Doran, Bishop of that See, was, in 1529, barbarously murdered by his archdeacon, Maurice Kavanagh—probably one of the family commemorated by these tombs. Clougherouske, in Clanreynold, is mentioned in a Chancery Roll of 1548 (Morrin, i. 178), and this is doubtless the place twice mentioned in connexion with the members of the O'Byrne family in the following document:—

"Inquisition at Carlow, September, 1625.—Richard late bishop of Leighlin was seized of Killenu and Garrebit in county Carlow, and with the assent and consent of the dean and chapter of the cathedral of St. Lazarian of Leighlin, by deed dated 8th December, 1589, granted them to Henry Sheffielde of Fennors-court in said county, his heirs and assigns for ever—said Henry, by deed dated 1st May, 1691, in consideration of a sum of money, conveyed same lands to Mortagh M'Tirlagh Birne of Cloughrousk, and Fferdorrough O'Gormogane of Grangefort in county of Carlow; and aforesaid Mortagh and Fferdorrough by writing dated 2nd May, 1602. granted to Edmond Birne of Cloughrousk all and singular the said lands.—Held of the king by knight's service."

The exhortation which closes the 1555 inscription runs thus, commencing with a distich:—

"O vos omnes qui transitis  
Rogo nostri memores sitis.  
Fuimus quod estis. Fueritis aliquando quod sumus."

This is a variation of one of the simplest and commonest formulas in mediæval epitaphs. An early example in Norman-French is found at Lewes on the tomb of John Warren, seventh Earl of Surrey, who died in 1304 :—

“ Vous qe passez, on bouche close  
Pries pur cely ke cy repose :  
Eu vie come vous estis jadis fu,  
Et vous tiel serietz come je su.”

Almost identical with this, but longer, is the epitaph in Canterbury Cathedral on Edward the Black Prince, 1376, given in “Pettigrew’s Epitaphs,” p. 42. The late eminent antiquary, Mr. J. Gough Nichols published, in the *Gentleman’s Magazine*, an English metrical translation of twenty-eight lines, commencing :—

“ Whoe’er thou art, with lips comprest,  
That passest where this corps doth rest,  
To that I tell thee, list, O man,  
So far as I to tell thee can,  
Such as thou art I was but now,  
And as I am so shall be thou.”

A very doggerel and unmetrical English version of this common subject will be found in the Preface to “Pettigrew.” See also examples at pages 63, 64, 66, 72, 73, &c., of that book. An Irish example is to be found printed in the *Rl. Hist. and Arch. Journal of Ireland*, of April, 1870, p. 119.

Perhaps I may venture, in conclusion, to offer my rendering of the less elaborate “moral” on the Leighlin tomb :—

“ All ye travellers who pass by  
Think, I pray, of me ;  
As ye are so once was I ;  
As I am so ye shall be.”

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LVIII.—FLINT IMPLEMENTS FROM THE NORTH-EAST OF IRELAND. By  
W. J. KNOWLES. (Plates XXII. and XXIII.)

[Read, June 22, 1885.]

IN a previous Paper read before the Academy on June 11, 1883, I endeavoured to show that certain flakes and other worked flints from the north-east coast of Ireland were older than the neolithic age. Since that time I have given considerable attention to the subject, and would now beg leave to present a further report of my investigations in proof of that theory.

THE RAISED BEACH.—I stated in my former Paper that I had found boulder clay on the surface of the raised beach, and also mixed up with the stones beneath the surface in some places.<sup>1</sup> I was aware that Mr. G. H. Kinahan, M. R. I. A., had stated that Esker drifts were sometimes found on low ground;<sup>2</sup> and I ventured to express the opinion that the long ridge-like formation known as the Curran might be rather of the nature of an Esker than an ordinary raised beach; that, though only twenty-five feet above high water-line, it might be older than the ordinary twenty-five feet raised beach; but I did not mean to deny that there was a raised beach at all, as some seem to imagine. Anyone can see that the shore has been raised, and with it not only the gravelly formation at Larne, but the chalk, lias, and every other formation along the north-east coast.

I have no wish to set up my own views on a geological question against the opinion of experienced geologists;<sup>3</sup> and I shall not, therefore, on the present occasion, make any reference to the question of the boulder clay being found in connexion with the gravels, but content myself with my former position, that the worked flints, being found at all depths of the various sections, cannot be classed as surface objects, and are therefore older than neolithic implements as defined by our highest authorities. In addition to this I can give very good proof of the age of the implements, without making any reference to the age of the gravelly formation of the raised beach.

THE WORKED FLINTS FROM THE RAISED BEACH.—I have found flakes, cores, and large pear-shaped implements at various depths in the gravel;<sup>4</sup> but among these there are no arrow-heads, scrapers,<sup>5</sup> quartzite hammer-stones, or smaller chips, such as we meet with in

<sup>1</sup> *Ante*, p. 209.

<sup>2</sup> *Geology of Ireland*, p. 226.

<sup>3</sup> Mr. Kinahan has informed me that I cannot look on the raised beach at Larne as any older than the ordinary twenty-five feet beach.

<sup>4</sup> I have not yet found any of the longish pointed implements *in situ*.

<sup>5</sup> Rev. G. R. Buick has obtained one very large scraper, but unlike our undoubted neolithic scrapers in many respects.

ordinary flint factories like those I have explored at Ballintoy, Portstewart, and Dundrum. If the worked flints of the raised beach are of neolithic age, it is therefore a strange fact that all those objects, which are admitted to be of that age, are absent.

The worked flints from the raised beach have a thick crust, mostly white, but sometimes reddish, having been stained before inclusion in the gravels; while arrow-heads, scrapers, and other implements of undoubted neolithic age, which are found in various parts of the country, are only very slightly changed.

On the surface of the crust there is a porcellaneous glaze, so hard that it cannot be scratched with a knife; but, when broken, we find that the part beneath the surface corresponds very closely, both in appearance and hardness, with the broken edge of a piece of common delf. I have several flakes and cores which I found *in situ* in the gravels which have had the hard glazed surface worn off, especially at angular parts, such as the ridge made by the removal of two flakes, leaving the rough and more porous part beneath the surface exposed. I can prove, from the action of the waves at the present time, that this wearing away of the glazed surface was caused by crusted flint having been rolled about by the waves. If we pick up some of the pieces of ordinary delf which find their way to the sea-shore near towns, we will find that, from having been rolled about by the waves, the glazed outside has been worn off the angular ridges frequently found about the bottom and rim, leaving the rough interior exposed, just as we find in the case of the flints. When those flints which have had the glazed surface worn off are compared with the pieces of waterworn delf, the likeness is very striking and convincing. This shows us that the thick delf-like crust had been formed on the worked flints, and that they had been rolled about by the waves of the sea till the hard glazed surface was in some parts worn off, before being inclosed in the gravelly formation of the raised beach. The worked flints are therefore older than the formation in which they are included.

**THE INCRUSTATION.**—When a flake or other incrustated flint is broken, we find the crust to be of considerable thickness. I have found it, in some cases, to occupy fully two-thirds in thickness of the substance of the flake. The crusted part does not break with the smooth even fracture of the flint, but is rough and hackly. It is the weathered part of the flint, and must have been formed by exposure to the atmosphere, or when only so slightly covered that air and water had free access. I have paid attention to the subject for some time, and I find that the weathered crust has not formed on flints buried in the boulder clay, nor in the interglacial gravels which are covered by boulder clay. Neither has it formed on flakes and scrapers which I found imbedded in the old surface layers of the sandhills near Ballintoy, Portstewart, and Dundrum; while flints found on the surface near those places are more or less whitened and glossy on the surface. I have also obtained arrow-heads and other manufactured



flint objects from peat bogs having their surface dull and fresh, as if only newly made.

The incrusting process would, no doubt, be largely influenced by the nature of the flint, some kinds containing more impurities than others, and also by atmospheric conditions. The crust might therefore form on the flints of one district more quickly than on those of others; but, in county Antrim, the quality of the flint from which the worked flints of the raised beach were formed must, in many cases, have been similar to that from which our arrow-heads and scrapers were made; and supposing both sets to be of the same age, the conditions as to climate must often have been the same for both. Might we not, therefore, reasonably expect that if not generally, at least frequently, we would find arrow-heads and scrapers as deeply crusted as the flints of the raised beach. We find, however, that such is not the case; and that even arrow-heads and scrapers found on the surface at Larne and Island Magee, quite close to where the whitened flints of the raised beach are taken up, are frequently without the slightest trace of weathering. I think it will be taken for granted that I speak from sufficient experience, when I say that I have been collecting flint implements for over twenty years, and that my collection of flint objects of neolithic age exceeds 6000, fully 2000 of which have been collected by my own hands. Yet in examining all these objects, I find no change on the surface that can at all be compared with the great change that has taken place on the surface of the flints from the raised beach.

We meet sometimes with arrow-heads which have the surface whitened, as, for example, those found at Portstewart, but, if broken, the crust will be found to be very thin. We find other arrow-heads, again, whitened all through; but if we break them, we see that the substance has still the close texture and even fracture of flint; and if the whiteness is the result of a change caused by exposure to the weather, and not owing to the flint partaking of that colour at first, then the change must be in a very early stage as compared with that which has taken place on the flints from the raised beach.

The crust on palæolithic implements is frequently spoken of as a calcareous incrustation; but the crust of the flints from the raised beach seems to have nothing calcareous about it, as I have tried acids on many specimens, and found no effervescence. I have not had a chemical examination made; but I believe it will be found that the weathered crust is a silicate of some kind.

In some of the flints the crust has a banded appearance, almost like an agate. Fig. 9, Pl. XXIII., shows the section of a broken flake, where the crust is divided into two by a band of closer texture passing along the middle. In Fig. 10, Pl. XXIII., we have the section of an implement which has been broken, where five bands are seen, three of which are light-coloured, and separated by two other bands of closer texture, approaching in appearance the unaltered flint of the interior of the implement. I do not know what these lines of closer

texture may mean, unless they would indicate a time of rest from the weathering process. If so, some of the worked flints from the raised beach may have been imbedded in other formations several times, being exposed by turns, when the weathering would go on again.

**THE NEOLITHIC PEOPLE WORKING THE CRUSTED FLINTS.**—The sandhills of Whitepark Bay, near Ballintoy, show the remains of an extensive flint factory. I have obtained a large number of neolithic flint implements from this place, some of which were imbedded in darkened layers—the remains of the ancient surface layers which existed at the time the flint workers lived there. The old surface layers were covered up with a great thickness of sand, which was preserved until lately by a close sward of grass. When I first visited the place about ten or twelve years ago, the covering of sand had been almost entirely removed by the wind, and the old floors and sites of dwelling-places were again laid bare. Around these hut sites there was the appearance of a busy trade having been carried on at one time, in the manufacturing of flint implements. The old soil, which was more coherent than the sand on which it rested, contained not only manufactured implements, but cores, flakes, and hammer-stones, besides the teeth and broken bones of the animals on which the people lived. There were also their needles and borers made out of splinters of bone, and hammers made from antlers of the red deer, but no trace of metal of any kind. Everything was of the ordinary neolithic type. During one of my visits to this place, I observed several flints with a deep incrustation like that on the flints from the raised beach, which had been chipped and flaked by the neolithic flint-workers. On making a search I found, farther down, near the shore, coarsely-chipped blocks and cores, together with thick heavy flakes, all deeply incrustated like those occurring at Larne. The explanation was clear at a glance. The neolithic flint-workers of the sandhills had found these older cores and flakes thickly crusted even in their time, and carried them up to beside their huts, and tried to re-work them. I found many pieces which must have proved intractable, and been thrown down as useless; but I have one curious, knife-like chopper which they have manufactured out of a very large flake of the older age. The old surface is deeply crusted; but the newer work is almost unchanged. Where they have succeeded in getting off passable flakes, we always find the thick crust on one side, while the fracture made by these newer people is quite fresh. It would appear to me that there was a stoppage of the weathering process during all the time the flints were buried, and that no change had taken place in either the old or new surfaces. I find that the same state of things existed at other places; and I have an excellent core of the older age, from Portstewart, which has been used as a hammer by the newer people.

**WORKED FLINTS FROM THE BOULDER CLAY.**—When examining the boulder clay near Larne, I found, in one section, six feet from the surface, and firmly bedded, a flint core having two flakes struck off, leaving depressions where the bulbs of the flakes had come out. The

two flakes have come off quite close to each other, leaving a ridge such as we find in ordinary cores. There is a natural prong jutting from the core; and if we look at the object as a whole we find that it would make an excellent pointed implement of the kind figured in Plate XXIII., fig. 5. In another section I found a flake-like flint, but without a bulb, having the edge partially dressed for scraping.

I do not think anyone would doubt the artificial character of the flaking on these specimens.\*

**FLINT FLAKES FROM INTERGLACIAL GRAVELS.**—I stated in the note at end of my Paper on Flint Implements from Larne and the North-East Coast,<sup>7</sup> that I had found two flakes in gravel, capped by thirty feet of boulder clay. These were found at Ballyruder, about half way between Larne and Glenarm. We find there a mass of gravel not unlike the Larne gravels in some respects, but having a covering of boulder clay about thirty feet in thickness, and containing shells of Arctic character.<sup>8</sup> I have made several examinations of these gravels, and have now obtained ten flakes. Several of these have marks on the edge, as if made by scraping; but one small one is neatly dressed all round the edge. Two are outside flakes; seven are uncrusted; two have the surface whitened, but there is no deep crust; and one has a deep incrustation like the Larne flakes, but the crust has been split off the greater part of the back. I have not the slightest doubt that this flake was incrustated before being included in the interglacial gravels. The flakes have all well-marked bulbs of percussion, and are similar to flakes of artificial character that we find in many other places in Antrim. None of them were received from workmen, or obtained by examining masses of loose material; but all were found by myself by slowly excavating the gravel of the section, and taking out with my own hands any flint object that appeared *in situ*. I figure two specimens (see figs. 7 and 8, Plate XXIII.).

I have also obtained from these gravels several core-like flints, together with an object which, though rude, I consider to be of the same character as the large pear-shaped implements from the raised beach.

**THE BULB OF PERCUSSION.**—As the bulb of percussion is a principal test for determining the artificial workmanship on flints, this may be considered the proper place to say a word or two about it. I have made some experiments in breaking flint, and, as far as my experience goes, the bulb can only be produced by a blow. The cause of the

\* I also found a large pear-shaped implement with supposed glacial markings on an artificially dressed surface; but as I did not find it imbedded in any formation, and as authorities differ—one doubting the glacial character of the marks, and another the artificial character of the flaking—I will withhold it for the present.

<sup>7</sup> See *ante*, p. 213.

<sup>8</sup> For a list of those shells, see Paper by Canon Grainger, M. R. I. A., *British Association Report* for 1874, Trans. of Sections, p. 73.

bulb I imagine to be this:—When a blow is struck on some homogeneous substance like flint, a series of waves will be produced through the body of the object struck, all radiating from the point of impact. The fracture is determined, I believe, by the course of these waves and a downward force which is also imparted. The waves, proceeding in concentric circles, will cause the cone or bulb, which, it will be observed, is sometimes step-like in character. We find in the flakes from the raised beach, and also from the interglacial gravels, that two and three cones are produced in the same flake. An imperfect hammer, by producing two or three points of impact, would, I imagine, originate the extra cones.

If flint breaks up naturally, or is broken with a massive hammer, which strikes a good breadth of surface, no bulb will be produced. A rocking motion will, I believe, produce bulbs; and the minute dressing on the edges of our finer flint implements may have been produced in this way, instead of by direct blows.

On the sea-shore, the rolling of the waves, by knocking one stone against another, may sometimes separate a flake with a bulb from a piece of flint, but these are mere chips; and oftener we find the fractures that have been produced by the wave having no mark of a bulb. Anyone who pays attention to the action of water on flint, glass, or broken delf, will find that cases of fracture by the action of the waves are rare. There is a rounding off of angles, and a tendency to turn the object into a rounded pebble; but there is no general production of flakes.

THE IMPLEMENTS.—Besides the flakes, we find implements of two or perhaps three kinds in the sections and among the denuded materials of the raised beach.\* One kind is rudely dressed, so as to form a longish pointed implement, seldom much broader at the base than the point. I have figured several of these in my previous Paper on 'Flint Implements from the North-East Coast'; and I now show a very peculiar one from Island Magee. It is very much more massive at the point than the butt, and it may possibly have been intended for mounting. At the point a small splinter has been broken off by the action of the waves; and I may remark, in passing, that this fracture shows no sign of a bulb having been produced. The implement is seven and a-half inches long; and from about the middle

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\* In an opening paragraph of my previous Paper on Flint Implements I made a remark, intended only to apply to some flakes from Larne, in the Royal College of Science, to the effect that the objects hitherto found and described as implements were in reality only flakes. Mr. W. Gray, M. R. I. A., has reminded me that both he and Mr. J. H. Staples have described implements from the raised beach. I am sorry that I have done injustice to Mr. Staples or Mr. Gray, even in a prefatory remark. See abstract of Paper, showing result of very careful observation by Mr. Staples in *Belfast Naturalists' Field Club Report* for 1882, and Mr. Gray's Paper in *Journal of Royal Historical and Archaeological Association of Ireland* for July, 1879.

to the point, it is more or less triangular in section. I show both front and side views (but the point, by mistake, has been placed downwards in the figure) (see Fig. 1, Pl. xxii.). I have several others of this type.

Fig. 2, Pl. xxii., shows an implement dressed all over, with the exception of a small piece of the natural crust at the base. It is triangular in section, and is of the kind which would be described as shoe-shaped. It approaches, in my opinion, the form of certain shoe-shaped implements from Acton, which I have seen exhibited in General Pitt-Rivers' collection at South Kensington. It was found in Island Magee, and is five and three-quarter inches long and three inches broad at the base.

A second kind consist of implements with a heavy butt for holding in the hand, and pointed at the opposite end, one of which was figured in my previous Paper.<sup>10</sup> Some have natural prongs of flint for a point, and a dressed butt to fit the hand. Fig. 5, Pl. xxiii., shows a cone-like implement of this kind. It is four and a-half inches long and nine inches in circumference near the base, it was found at Kilroot. I have several implements with dressed base and natural point; and in all the cases the intention of using the natural prong as a point is perfectly evident. I have, besides these, several implements with natural base and dressed point. An implement made from a split flint pebble is shown by Fig. 3, Pl. xxii. It is oval in shape, four and a-half inches long, and three and a-half broad at the base. It is flattish, and approaches in shape some palæolithic implements, though much ruder. Very little of the original outside crust has been dressed off, and the dressed parts are heavily crusted. The edges have never been sharp or intended for cutting. It was found at Kilroot.

I show, in Fig. 6, Pl. xxiii., an implement much of the character of the large pear-shaped implements, only that it is smaller, and has been dressed all over. In this specimen, though an excellent pointed weapon has been produced, we see none of that alternate flaking from an edge such as we find in palæolithic and neolithic implements. The point has been the only part intended for use. It is four and a-half inches long and seven and a-half in circumference at the base. It was also found at Kilroot, not far from where I got the previously described specimen. (Fig. 3, Pl. xxii.)

Fig. 4, Pl. xxii., shows one of several implements from the raised beach which may be taken as a separate class. They are pointed, but short, and have probably been used mounted. The dressing has been made by a few bold strokes.

Fig. 7, Pl. xxiii., shows a flake from the interglacial gravels at Ballyruder, half size; but the bulb is not well brought out in the figure.

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<sup>10</sup> "Flint Implements from Raised Beach at Larne," &c., Pl. xiv., Fig. 1, *antes* p. 209.

Fig. 8, Pl. xxiii., shows a small scraper-like object from the same gravels, natural size. The figure, however, does not do justice to the dressing along the edges.

CONCLUSION.—I have now shown, as I did in my former Paper, that those worked flints which I class as the older series are found at considerable depths beneath the surface in the gravels of the raised beach. They thus differ from neolithic objects, which are found on the surface.

That a thick, weathered crust had been formed, and the flints rolled about by the waves till the crust was in part worn away, before the gravels of the raised beach were formed; while implements of admitted neolithic age are neither so encrusted nor found in the gravels.

That we find, at various places round the coast, the neolithic flint implement-makers trying to re-work the older flint flakes and cores, which were deeply incrustated even in their time.

Even the worked flints from the boulder clay and interglacial gravels are not, for the present, taken into account. I think I have given sufficient evidence to prove that we have two sets of flint implements in the north-east of Ireland, one of which is older than the neolithic age.

There is, however, a difficulty in settling the age of the older series. Are they, for instance, older or newer than the palæolithic implements? I am hopeful that the interglacial gravels may yet throw further light on this point. It appears to me that to English archæologists no evidence is satisfactory as proof of flint implements being of palæolithic age but the finding with them of remains of extinct mammalia. You must have river gravels and extinct mammalia or caves and extinct mammalia. I have not been able to find remains of extinct mammalia in connexion with my older set of implements; and therefore I have abstained from using the term palæolithic. It would seem to me that the term has become so identified with implements of a certain age, make, and finish, that it would appear out of place to apply it to implements of a different make, whether newer or older.

The implements of palæolithic age show such skill in workmanship, that anyone must see that they were not the weapons used by man in his earliest stage of development; and that before acquiring the skill to make a palæolithic weapon he must have passed through several stages. At first he would use natural stones; but experience would soon teach him that stones with a point were more effective than rounded pebbles; and necessity would soon induce him to try his hand at making pointed weapons.

Anyone comparing a series of the large pear-shaped weapons from the raised beach with palæolithic weapons would find some points of likeness. There would be the heavy butt, the pear shape, and point in both cases; but owing to the ruder make and finish of the former series, he would naturally conclude that they were the older of the

two. The palæolithic series would appear to be a higher development of the type from the raised beach. I am aware, however, that rudeness is not always a test of age; and that many things of a rude type are produced when an art is declining; but if this is sometimes the case, we must not allow ourselves to lose sight of the fact, that in an early stage human implements would be of a very rude kind; and taking into account all the evidence I have given in this Paper, I am inclined to the belief that, in the present case, rudeness does indicate age. I consider we have evidence, not of a decline of the art of making flint implements, but evidence of the art being in a comparatively early stage.

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LIX.—EARLY ECCLESIASTICAL SEAL OF SILVER INSCRIBED WITH THE NAME OF MAURICE HOLLACHAN, PROBABLY REFERABLE TO THE 14TH OR EARLY PART OF THE 15TH CENTURY, WITH REMARKS. By WILLIAM FRAZER, F.R.C.S.I., Member of Council, Royal Irish Academy.

[Read, January 26, 1885.]

THE Seal composed of silver which bears on it the name of Maurice Hollachan, belonging to a sept well known in the south-west of Ireland in early ages, and from which several individuals came who were connected with the ancient diocese of Ross, will interest the student of our ecclesiastical history, and deserves to be described and figured. I have the pleasure of exhibiting it to this Academy and will endeavour to call attention to its more important features.



We may assume that it was fabricated to be used as the distinctive signet of an Irish ecclesiastic who had attained no mean rank amongst the officials of his Church. Its history previous to falling into my hands is, I regret to say, imperfect. I obtained it through the kindness of Messrs. West, of College-green, who permitted me to become its purchaser. It had lain in their possession for some years, and there were not any records or other means of ascertaining whence it came, who had been its former custodians, or the slightest clue to its previous history, so that we are unaware how it continued to be preserved for so many years in as perfect condition as when its owner, Maurice Hollachan, got it made and used it for his distinctive and, I believe, official signet. I conjecture it was found in the earth, and sold by its finder. Fortunately it fell into good hands, and was not melted down, like too many objects of antiquarian interest, far more valuable as such than for their intrinsic metallic worth. Seals of this



description especially are of rare occurrence—indeed they are so exceptional in Ireland that this may be considered almost a unique example of its class and age.

The seal, I have already stated, is composed of silver; it weighs an ounce and a-half, and its massive silver handle, in my opinion, is the handiwork of the artist who made the matrix, and therefore of the same age as the matrix itself. Good authorities whom I have consulted support me at arriving at this conclusion; still there are individuals whose views I hold entitled to high respect, who consider the setting should be referred to a more recent date than the die portion. I am therefore bound to state their view, which is, that it was possibly reset about the time of James I., or early in the reign of Charles I. I give both these statements, so that each of us may form his own judgment from an inspection of the seal. As to the genuine character of the engraved part or matrix of the seal and its undoubted antiquity there can be no room for the slightest question on that point; and for myself, I fail to see what possible object there would be in resetting the antiquated matrix of a seal in a solid silver handle long after the individual who alone was interested in its employment had passed away. It is not the seal of a body corporate or collegiate, or the official badge of a bishop or prior of a church; it is altogether an article of individual property, though designed, we may with all reasonable certainty conclude, for the purpose of being employed by its possessor in discharge of the official duties of his position, probably the management of ecclesiastical property and the due execution of bonds, agreements, and leases.

The engraved surface of the seal is of oval shape, measuring an inch and quarter in length and an inch one-eighth in breadth. It is deeply and boldly cut with a graving tool—rather undercut in some parts, and therefore unsuited for yielding impressions with the hard sealing wax melted by flame such as we now employ. I find it affords the most successful results with a soft wax composition similar to that which dentists are in the habit of using for their moulds; and when this is softened in warm water to a suitable consistence and temperature, and the seal itself warmed by dipping it for a short time into hot water also, and then dried and impressed with a firm hand, it yields favourable and clear impressions. It is obvious that the engraver in his design contemplated the reproduction of the semblance of a cathedral window with its elaborate stone tracery and pillars of Tudor or Floriated Gothic Architecture, filling up the windows with figures similar to those seen in its stained glass panes, and he has carried out this elaborate intention with remarkable artistic ability, so that both the design itself and the mode of its execution would induce me to refer it to the cunning hands of some Flemish artist. In support of this idea, I would refer to the great work published in 1873 by G. Demay, the *Inventaire des Sceaux de la Flandre*, which is profusely illustrated by photographs of several of the seals described by him, belonging to different periods. Amongst them we notice several

bearing close resemblance to the seal of Maurice Hollachan, in the character of the design, in the manner in which it is carried out—that is its art execution—and also in the style of letters used in the inscription itself, so that at the least we may fairly say that the special School which produced these Flemish seals must have trained the artist who designed and cut the seal we are now considering.

Thus, No. 5849.—The seal of an Archbishop of Cambrai, A.D. 1393, is a good example of Gothic architectural design; and though the lettering is of an earlier type, still the M ( $\Omega$ ) used in MAVR is identical with that found on this seal.

No. 6057.—Chapter of Notre Dame of Laon, A.D. 1403, which resembles in design and inscription the last.

No. 7166.—The Abbé of Saint Ghislain, A.D. 1427, which is also a Gothic architectural design, and has the lettering similar to that on Maurice Hollachan's seal.

Again, in the great work of Mr. Henry Laing—his *Supplemental Catalogue of Ancient Scottish Seals*, Edinburgh, 1886—we have—

No. 1019.—The seal of Nicholas, Bishop of Dunkeld, A.D. 1408–1411 (see plate x., fig. 6). In this the Gothic architectural design is carried out, and the style of letters is similar to that of Hollachan.

The engraved surface is divided into three distinct tiers or superimposed compartments rising successively above each other, of which the middle and upper tiers appear more strictly to carry out the idea of a church window or possibly a screen. The ornamental part occupies the entire field of the seal from top to bottom, leaving two separate detached portions, one on either side, extending laterally, on which the inscription is placed. Filling the upper compartments of the window are two adjacent niches less elevated in height than those which constitute the middle tier. Contained in one of these little cells we have the Almighty represented with raised hands in the act of blessing the Virgin, who occupies the other compartment, and is seated, holding her Son on her knees opposite to the Father. Both these figures are represented seated, and rather more than half length.

Underneath these seated figures, and occupying the centre of the seal, are three narrow niches or elongated divisions ranged parallel to each other, the recesses arched above and ornamented, each of them filled with a full-length figure of its appropriate saint, with their distinctive emblems. The cutting is so bold, sharp, and clear, that we have no difficulty in recognizing the features, appropriate dress, and special ecclesiastical ornaments of each of these little images. Figure No. 1 represents a bishop, who holds his crozier and presses a book to his breast. If the seal was the property of an ecclesiastic of the diocese of Ross, with which diocese several individuals of the sept or family of the Hollachans were connected, occupying the bishoprick and various other positions of importance, it was possibly intended to typify Saint Fachnan, who settled in Ross in the commencement of the 6th century, and around whose hermitage grew up the great mo-

nastery of Ross Ailithri, of which, in an ancient Irish Martyrology, he is claimed to be the first bishop; or it may be taken to represent St. Patrick himself, the patron saint of Ireland; but, in our uncertainty about the special locality with which the seal originally was associated, we must be content to say it is the figure of a bishop, name unknown.

Figure No. 2, occupying the centre niche, represents a martyr, who holds in one hand his palm of victory, and with the other the hilt of an executioner's sword, which extends along his side, the point being downwards.

Figure No. 3 is designed to represent St. Catherine, who wears a radiate crown, and presses to her breast the emblem of her martyrdom, a Catherine wheel: a short sword is depicted drooping from her other hand.

Situated underneath these three compartments we have a small cell, about as broad as it is high, with arched top extending to the lower edge of the seal. Its excessive breadth, compared with the other niches, is a common feature in seals of similar character, and is due to the artist's desire of occupying all the space at his disposal. In this compartment is represented the figure of a tonsured priest in the act of prayer, with uplifted hands. This of course typifies the owner of the seal, who claims it as his special property by the inscription in old English letters, *sigillum : Ma-ur : Hollachan*.

The tribe or sept to which this priest belonged, the "Hollachans," were originally possessed of considerable influence in the south-west of Ireland, and in particular in the diocese of Ross, where our Irish Annals record several persons of that name who occupied offices of distinction in the early Irish Church. I must express my great obligations to Dean Reeves for his kindness in affording me valuable information relative to these matters, for he freely gave me the assistance of his extensive knowledge in endeavouring to discover the owner of this signet. Quoting from the notes so kindly sent me by Dean Reeves, we ascertain that in—

A. D. 1158–1182, Donnell O'Huallachain was Archbishop of Munster (Cashel).

A. D. 1275–1290, Peter O'Hullechain was Bishop of Ross.

A. D. 1331–1333, Laurence O'Haldachain was Bishop of Ross.

A. D. 1375, Robert O'Huallachayn was Abbot of Tracton (Abbas Trector), Co. Cork.

A. D. 1380, Nicholas O'Houlachain, Precentor of Ross.

A. D. 1381, John O'Houlachaine, Dean of Ross.

A. D. 1551, a grant of English liberty was made to Maurice O'Helaghan, a priest (Patent Rolls, 5 Edward VI.).

Dean Reeves in his notes informs me, "As this is the only person of the name of Maurice I find mentioned, I give the references to him." See Morrin's (J.) *Calendar of the Pub. and Ch. Rolls of Chancery*

in *Ireland*, Hen. VIII., Edw. VI., and Eliz., vol. i. p. 248. No. 131 (Dublin, 1861).

I will add to this list that—

"The benefit of English liberty was granted to Robert Holhane, son of Philip and Marguerite de Barry." See Report of Commissioners of Public Records in Birmingham Tower, 3 Hen. VI., about A.D. 1450, which certifies that "the Hologans were and are loyal subjects in the county and city of Cork since the conquest of Hibernia."

Also a Philip Hologhan, who was the last prior of Kells, and surrendered the priory 8th March, 31 Hen. VIII.

It is evident that the greater number of persons bearing this name belonged to the south-west of Ireland: still we find a Hollachan had possessions in Connaught, for Hardiman, in his *Iar Connaught*, mentions that A.D. 1585, a Donal Oge O'Houlaghan was one of the twenty gentleman having castles in the O'Flaherty's country.

It is unnecessary to examine the family history further. Whether the O'Nolans of Wexford and Wicklow are related to this family, or whether such Anglicised names as Merry, &c., are descended from the primitive stock, will not clear up one iota about this seal and its missing owner.

We must turn to a different mode of research, and for suggesting it I am indebted to Thomas Drew, Esq., R.H.A., who directed my attention to the architectural details of the design. Seals of this description, with Gothic Architecture, were used from about A.D. 1390, for at least one hundred years; and in the case of Tudor Gothic, which commenced during the reign of Henry VII., its employment was continued in Ireland, especially in our more remote districts, for a much longer period than in England, works of such a modified Gothic being erected during the reign of Henry VIII., and even down to the time of Mary, and possibly to the end of her reign. Now here a source of error occurs: the lower compartment, by its width and peculiar quadricentred arch, might be termed true "Tudor" Gothic, but it is a mere accident, owing to the artist desiring to utilize the entire space at his disposal, and is found in several seals before the era of "Tudor" Gothic; so this also fails us, beyond affording an approximate limit of age.

The imagery engraven on the matrix is obvious, and meant to convey a perfect belief in the doctrines and teachings of the Roman See; on which account we would be induced to conclude that its proper date must be antecedent to the time of the Reformation; yet we require to bear in recollection that although Henry VIII. in the latter years of his reign confiscated the Church property here as well as in England, the Reformed doctrines did not receive general acceptance in Ireland; and again, upon the accession of his daughter Mary, the Roman Church once more regained its old ascendancy, and a zealous Churchman during her reign would find no difficulty in using such a seal. We find it, therefore, necessary to consider the character of the letters composing the inscription, which are in early English,

and I think decidedly earlier than the reign of Queen Mary. The form of the letters employed is that which replaced the Lombardic characters, and the earlier English with its *G* and *C*—in fact that which came into use during the fifteenth century. And there is one letter of some importance—the *M* used in *M<sub>1</sub>x-ur*: this is an early and persistent form; it occurs for its last time on the coinage of Henry VIII. in his eighteenth year, A.D. 1527. But this coinage continued unchanged until his thirty-fourth year, A.D. 1543, when it was finally replaced by Roman letters.

On a careful review of the questions in these different aspects, considering the character and art workmanship of the seal itself, the style of architectural ornamentation, the archaic yet delicate execution of the minute figures which decorate it, and also the form of lettering used in the inscription, all of which require to be studied before venturing on a decided opinion; I would feel disposed to refer the date of this seal to the reign of Henry VII., or possibly at the latest to the earlier years of Henry VIII., as the approximate period which carries with it the greatest amount of probability.

Could the Maurice O'Helaghan, that priest who obtained the grant of English liberty in 1551, have been its possessor? We know nothing of his antecedents or official position. It was in the middle of the brief reign of Edward VI. that he submitted to accept the position of an English freeman. At that time he may have become an old man, wearied with strife, and desirous of rest. Thirty years before he was possibly young, full of hope, and already held in honour by his Church. Maurice may have gone to Flanders about the time that Henry visited France for the Field of Cloth of Gold, with his nobles, and, when there, had this signet graven: if so, he lived to see great changes in both Church and State. My duty is to place on record a description of this remarkable seal, and trust that someone more fortunate will be able to discover the name and rank of its original possessor. It is valuable to us as a relic of mediæval Irish history, and its execution evinces a true appreciation of art worthy of Ireland and its Celtic race.

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LX.—INQUIRY AS TO THE PROBABLE DATE OF THE TARA BROOCH AND CHALICE FOUND NEAR ARDAGH. By MARGARET STOKES. (With a Chart.)

[Read, June 28, 1886.]

It is much to be regretted that the date of two of the finest examples of goldsmiths' work of the Christian period in Ireland still remains undecided. They are the Tara Brooch and the Chalice found at Ardagh, in the county of Limerick. I hope this evening to bring before your notice, in as few words as possible, some points in both these relics which, when considered, may help us, if only approximately, to determine the period at which they were executed.

In dealing with such questions, the antiquary should, in the first instance, learn the existence, as well as trace the history, of certain laws, which he and all subsequent workers may apply, with more or less confidence, to the formation of a chronological classification of the objects they are dealing with. The first step in this direction should be to place in regular order the series of objects whose date has been already ascertained, so that they may serve afterwards as landmarks—starting-points for the future classification of undated ones.

When we consider the numerous examples we possess of goldsmiths' work in Irish Christian art, it will be observed that certain variations take place, at certain periods of time, in those classes of antiquities among which some are to be found the date of which is fixed by the inscriptions that they bear: variations in the composition of the metals, in the methods of working the metals, in the enamels, and in the designing of the patterns and scrolls with which the surface is adorned. It is found, on a comparative study of the relics whose date is more or less fixed, that such designs as are held to be peculiarly characteristic of Irish art are not common to every period in the history of its development, but are confined to a more limited space of time than has been hitherto believed.

In order to present the argument as briefly as possible, allow me to refer the reader to the Chart appended to this Paper, where he will find a chronological arrangement of those examples of Irish illuminated manuscripts, metal-work, sculptured crosses, tombstones, and architecture, the dates of which have been approximately fixed. This Chart is seen to cover a period extending from the fifth to the twelfth century, and commences with the rudest example of metal-work we can find—the iron bell of St. Patrick. It is remarkable that the primitive Christian metal-work should have been of so barbarous a character, since we know that the Irish had already attained to great skill in the



art of design and the working of metals, as well as in various processes of enamelling, before the coming of Patrick. The bronzes of the Late Celtic period have never been surpassed in the metal-work of the Christian period in Ireland; and many of their processes appear to have been totally different from those introduced with Christianity. After this new system had had time to settle and bear fruit, we find the arts of filigree, damascening, mosaic, glasswork, and enamelling, are brought to much excellence. Interlaced designs are introduced, which never appeared in the pre-Christian art of Ireland; and it would seem to be the case that they came into Ireland with the first missionaries, since similar patterns characterize the early Christian art of the north of Italy, and were probably Roman in origin. Indeed, designs formed of knots and plaited bands are common in the primitive art of many and various races.

Still the advance of any decorative Christian art in Ireland was but gradual. Nothing can exceed the rudeness of those relics of the early teachers of religion, that have been preserved for us through the care of their relic-loving successors in the eleventh and twelfth centuries. The rude iron and bronze bells of St. Patrick or of St. Columba, of the fifth and sixth centuries, are as inferior to the bronze bell of Cumascach M'Ailello (A.D. 904) as the uncemented stone oratory is to the Romanesque church of the twelfth: and we read of croziers, but find them to have been the oaken staff of the itinerant bishop, which is still visible through the chinks and openings of the metal case in which it was afterwards enshrined. But perhaps nothing helps the mind more vividly to realize the simple practices of these early Christians than the sight and touch of the rude stone chalices—such as have been preserved to the present date in a few of our most remote churches. Decorative Christian art grew to gradual perfection from the ninth to the tenth centuries; and it is interesting to see that it had been grafted on the pagan art of pre-Christian Ireland, and that certain designs (besides those interlaced patterns which we hold to have been of foreign importation), common in the native art and the bronzes of the Late Celtic period, were used by workers in metal of the Christian period, and carried to great perfection in the illuminations of manuscripts. These native designs, however, are not seen at so late a date as the interlaced patterns; and rarely, if ever, appear in the eleventh and twelfth centuries, which period was distinguished by the finest interlaced work.

In the ornament that enriches the surface of such examples of architecture, sculpture, and metal-work, as bear evidence of having been executed before the year 1020, we invariably find one distinguishing design, which fell into disuse after the date 1050: this has been termed the divergent spiral, or trumpet pattern. This design consists of two lines wound in a spiral, on leaving which the two lines diverge; and at the end of the space is a curve formed by the parting of the lines, like the mouth of a trumpet; then the lines converge again, whirling to a centre, where they turn, and, winding back again.

diverge and converge as before; thus forming a design, the lines of which may be carried on in an infinite series of circles and curves, the opening spaces of which are filled with colour by the illuminator or with enamel by the goldsmith. This design is found on the Late Celtic and pre-Roman works of Britain, *i. e.* between 200 years before the birth of Christ and A.D. 200. During the Roman occupation of Britain it seems to have become extinct in that country; but it lived on in Ireland, and works in metal, marked by it, may belong to a period bordering on that of the introduction of Christianity in Ireland, *i. e.* the third century. It must be remembered, also, that in Ireland there are two distinct modifications of this design—one appearing on the bronze and gold ornaments of apparently pre-Christian art, the other on decidedly Christian monuments, down to the eleventh and twelfth centuries; and there are stone monuments in Ireland where the transition from one to the other may be clearly traced. In the oldest variety, the large curves of the diverging lines form the essential element in which the artist revelled; in the second and later variety the curved spaces are treated as secondary to the spiral, and instead of one whirl round to the centre, you have twelve or more. After the tenth, and perhaps the beginning of the eleventh century, this design disappears from Irish art; and its decay and death may be traced in monuments whose dates have been satisfactorily ascertained.

There is no trace of the divergent spiral upon the shrine of St. Manchan, *circa* 1166; neither is there on the case or shrine of Dimma's Book, A.D. 1150; on the cross of Cong, A.D. 1123; on the stone cross of Tuam, A.D. 1123; on the crosier of Lismore, A.D. 1101; or on the shrine of St. Lachtin's arm, A.D. 1106. In works of the eleventh century it scarcely ever appears. It is not to be found on the shrine of St. Patrick's bell, A.D. 1091; nor does it appear on the cathach of the O'Donnells.

The design is found—very sparsely used, and as if in its decay—upon the shrine of the Stowe Missal, A.D. 1023. It occurs, in a more excellent form, on the shrine of Molaise's Book from Devenish, *circa* 1000; and on the crosier of Maelfinnia of Kells, A.D. 967, as well as the top of the bell shrine of Maelbrigde of Ahoghill, *circa* 954. Thirty sculptured and inscribed crosses and tombstones in Ireland have been assigned, with tolerable certainty, to dates varying from the years 810 to 1123: of these, three belong to the ninth century, which are ornamented with this peculiar spiral; seven to the tenth century; and it rarely, if ever, appears in the eleventh and twelfth centuries. The trumpet pattern or divergent spiral is much used upon the high cross of Clonmacnois erected by Abbot Colman in memory of King Flann, and on the high cross of Monasterboice, erected for Abbot Muredach, *circa* 923. It is not to be seen on the high cross of Tuam, erected for King Turlough O'Conor, A.D. 1123. It seems to have fallen into disuse before this date.

The testimony of the illuminated MSS., as to the decay of this design in the tenth century, is very remarkable. There is no trace of

it in the MSS. of the thirteenth and fourteenth centuries, when interlaced patterns are still in use. It does not occur in the oldest copies extant of "Leabhar Breac," the "Book of Ballymote," the "Book of Lecan," the "Psalterna Rann," the "Leabharnah-Uidhri," the "Book of Leinster," the Irish "Missal," in Corpus Christi College, Oxford, in the Irish "Psalter" (Brit. Museum), or the "Book of Hymns," A.D. 1150 (Trin. Coll., Dublin). Neither is it to be found in the "Psalter" of Ricemarch, in the same library, or in the "Chronicle of Marianus Scotus," now in the Vatican Library, Rome. It is seen in its most perfect development in the illuminated books of the seventh, eighth, and ninth centuries, but seems to die out after the year 900. It appears in the greatest redundancy in the oldest part of the "Book of Kells," the date of which, I begin to believe, must have been about the year 690. It also appears in the "Books of Durrow"; the "Gospels of Willibrord," A.D. 739; the "Book of Armagh," A.D. 750 to 807; the "Gospels of Thomas of Honau," A.D. 750 to 808; the "Gospels of Mac Regol," A.D. 820; the "Golden Gospels of St. Germanus," A.D. 871 (now at Stockholm).

The Tara Brooch and the Ardagh Chalice offer the most perfect examples of the use of this peculiar spiral that have been found in the metal-work of Irish Christian art; and we are strongly reminded of the decoration of Irish MSS. from the "Book of Kells," *circ.* 690, to the "Gospels of Mac Durnan," *circ.* 885, when we study them.

That these two examples of goldsmiths' work are contemporaneous there can be little doubt. They show not only perfectly similar developments of this spiral design, but many other points of agreement besides—the same filigree wire-work; the same Trichinopoli chain-work; the same circles of amber and translucent glass; the same enamels, both *cloisonnés* and *champlevés*. The native character which distinguishes the art of these works has very much disappeared from the metal-work of the eleventh and twelfth centuries. The shrine of St. Patrick's bell and the cross of Cong belong to a time when the trumpet pattern had fallen into disuse, just as it disappears from the illuminated MSS. after the year 1000.

These considerations have led me to correct my former error, in which, following a suggestion of M. Henri Gaidoz as to the probable history of this chalice, I was inclined to attribute it to the twelfth century. In the *Christian Inscriptions of Ireland*, vol. ii., p. 128, I brought forward Monsieur Gaidoz's theory, that this chalice might be identified with that which is spoken of by the Irish annalists, in the year 1129, as the work of Finola, the sister of Turlough O'Connor—"a silver chalice, with a burnishing of gold upon it, with an engraving by the daughter of Roderic O'Connor." The annalists state further that this chalice disappeared in the year 1125, when a great robbery was committed by the Danes of Limerick; and that Gillacomhgain, the chief person implicated, was afterwards executed at Cloonbrien, about fifteen miles distant from the spot in which this chalice was found concealed. However, as the annalists state that the objects

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stolen by Gillacomhgain were afterwards "revealed against him," there is really no ground for identifying them with this find at Ardagh.

Another result of this inquiry has been the wish to correct the opinion expressed at the close of the work on the *Early Christian Architecture of Ireland*, that the national character of our art first died out in the twelfth century. It would appear now that, as early as the end of the tenth century, merely local and native designs were beginning to give place to others more in harmony with Continental art, just as the round arch decorated Romanesque took the place of the primitive decorated style, with horizontal lintel and inclined jambs of the tenth-century architecture of Ireland.

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LXI.—ON THE DUBLIN STOCKS AND PILLORY. BY WILLIAM FRAZER,  
F.R.C.S.I., Member of Council of the Royal Irish Academy.

[Read, February 8, 1886.]

WHEN visiting the crypt of Christ Church Cathedral, in this city, some months since, I was much interested in noticing there a perfect example of the old Dublin stocks, in an excellent state of preservation. This once well-known instrument of punishment for minor offences, the terror of wandering beggars and vagrants, has so completely disappeared that the pair of stocks under Christ Church is, so far as I can ascertain, the only surviving specimen in our country. It therefore appeared to me deserving of some record; and so, having procured a small careful sketch of it, my friend Mr. Longfield kindly enlarged it to the size now shown in the drawing which I exhibit.

Every town and village formerly maintained its own pair of stocks, possibly every parish possessed them. Let me recall to your memory Canning's well-known verses, now ninety years old, of the "Needy Knife Grinder." They supply an accurate idea of the use to which our parish stocks were once applied, and of the legal authority invoked for so applying them:—

"Last night, a-drinking at the 'Chequers,'  
This poor old hat and breeches, as you see, were  
Torn in a scuffle.  
Constables came up for to take me into  
Custody; they took me before the justice;  
Justice Oldmixon put me in the parish  
Stocks for a vagrant.

The punishment of the stocks having falling into disuse for several years past, even the recollection of such an everyday infliction is rapidly passing into oblivion in these lands; yet, in the colonies and dependencies of our great empire, they continued to be employed up to a very recent date, if indeed, as is possible, they may not yet continue to be made use of. I have reason to believe that in Singapore they were in practical operation so late as the last ten or fifteen years; and a gentleman recently informed me that he constantly saw them employed in the penal settlement of Port Arthur, Tasmania, so far as I can recollect about the same time. It is proper to say that this penal settlement contained the worst and most desperate class of criminals; but at present no one would dream of offering this as an excuse for practising any form of torture whatever upon a human being, no matter how depraved. Yet, in addition to the stocks, leg bolts and shackles of iron, with heavy weights attached, were rivetted on the legs of prisoners at that time, and considered a needful part of prison discipline—proceedings now justly considered fit for the darkest ages.

There are lying before you a pair of heavy ivory leg-rings, weighing one and a-half pounds each; both of these are cut from the solid tusk of the elephant, and were removed from the ankles of female slaves, captured by our cruisers from Arab dhows on the coast of Zanzibar. One of these rings could be placed on the leg of any adult; for it can be opened and then fastened with strong wires; the other is incapable of opening and must have been forced upon the leg of a young person, there to remain immovable for life. The considerable amount of attrition from wear which they have undergone demonstrates the length of time they must have been worn. I understand they are constantly employed on African slaves to prevent their escape. I owe them to Mr. George Despard Twigg, F.R.C.S.I., Royal Navy.

I brought these "Locomotive Stocks" to point out on them a rude decorative pattern, consisting of a number of indented small circles, each with a central depression; similar little circles are of frequent occurrence in some of our early Irish antiquities; thus, for example, we notice such upon one of the whorls obtained during the excavations at the Donnybrook mound.

Our parish stocks must be considered a mild and modified survival of the ingenious instruments devised in the middle ages to imprison the legs. An inspection of the engraving by Georgio Ghisi, after Julio Romano, will satisfy any person curious about such matters, that a very painful form of stock for one leg could be employed. We also see how two unfortunate prisoners could be confined in one block of wood in such a manner that the slightest motion of their limbs must have inflicted distressing pressure upon each other in turn.

I understand the town of Balbriggan possessed a pair of stocks up to twenty-five or thirty years since. Elsewhere they probably disappeared before the commencement of the present century. A friend tells me that in Boyle an old woman was brought before the Justices, for some trifling offence, by an informer, for which she was punishable by a small fine or two hours' confinement in the stocks, to which she was forthwith sentenced; at the same time the sympathising magistrate considered it allowable to inform her there were no stocks in the town of Boyle, nor had been so long as he could recollect; under these circumstances it is needless to say the fine was not forthcoming.

The description and measurements of the Dublin stocks are as follows:—It consists of a separate and detached wooden seat. In front is a firmly-constructed framework of timber, composed of two square uprights, which measure five inches on the sides and front, and rise to the height of six feet two inches; these are strongly bound together above and below by crossbars, so that the space for the stocks measures four feet two and a-half inches. The stocks proper consist of two planks, which fit above each other and move in slits sunk into the upright posts; each of these planks has five semicircular perforations, which are completed by the juxtaposition of similar perforations in the edge of the corresponding plank; these openings are made of



different sizes, so as to suit all parties: one pair being four inches in diameter, another pair measures three and a-half inches, and there is a minor opening of two and a-half inches designed for juvenile offenders.

I am indebted to the kindness of the late Rector of St. Bride's, Rev. W. G. Carroll, A.M., for the following interesting *excerpts*, taken from the registry books of his parish, and relating to the history of their parish stocks, from the years 1664 to 1750. It is the last communication I received from him shortly before his death, and whilst acknowledging my obligations I must also express my regret at his loss. He took a deep interest in the early history of this city, and was unusually well-informed about it. We are indebted to his exertions for the preservation of several important records of former times:—

|       |   | £ | s. | d. |
|-------|---|---|----|----|
| 1664. | Mending the stocks, . . . . .   | 0 | 5  | 0  |
| 1665. | Do. do. . . . .   | 0 | 10 | 0  |
|       | Moving the stocks from Mill Pond,<br>(Little Ship-street), . . . . .      | 0 | 5  | 0  |
| 1669. | Mending the stocks, . . . . .   | 0 | 13 | 6  |
| 1675. | Mending the ironwork of the stocks, and<br>a new locke and key, . . . . . | 0 | 2  | 8  |
| 1679. | For stocks, and lock for them, . . . . .                                  | 2 | 11 | 2  |
| 1683. | Removing the stocks two several tymes, . . . . .                          | 0 | 1  | 6  |
| 1700. | Collaring the stocks, . . . . .   | 0 | 3  | 0  |
| 1735. | Repairing the stocks, . . . . .   | 1 | 16 | 0  |
| 1750. | For a new pair of stocks, . . . . .                                       | 3 | 0  | 0  |

See also St. Bride's Vestry Acts, 1678.

"The pavement before the Poore House door, where the stocks are, to be repaired."

This "Poore House" was the then Widows' Alms House, which stood at one of the corners of Bride-street and Bull-alley.

The stocks previously stood at the Mill Pond in Little Ship-street, and were moved to Bride-street in 1665.

The second volume of the *Kilkenny Archaeological Journal* contains an interesting article upon Kilkenny, illustrated by a lithograph reproduction of an old painting, which represents the Market Cross, and surrounding old houses. It was published by Mr. James G. Robertson, and shows us a distinct view of the stocks placed in public view upon the raised floor of the cross. Now, as the latter was pulled down about the year 1771, we may conclude that the stocks probably disappeared near the same time; for, after this, there does not seem to be any further record of them in Kilkenny. This date would correspond with the period they seem to have fallen into disuse over Ireland generally.

According to the ancient law of England, the Lord of the Manor

was responsible for maintaining at his own expense a pillory and cucking-stool, which some consider equivalent to a tumbrel; but I fancy the latter was altogether a different affair. At all events, the cucking-stool used for dipping scolds and ladies of doubtful character in filthy waters was a well-known mode of punishment for legal offences; but the parish stocks were by our ancestors considered to be another matter completely; they were mercifully intended not to punish but "to hold," and were therefore to be paid for and maintained at the cost of the town. In a word, the stocks were intended as a means of temporarily detaining wandering human beings under gentle restraint, in the same manner that stray cattle were kept hungry and without water in the village pound.

It was suggested to me that this notice of our early Dublin stocks would prove more interesting if I added a few brief memoranda about our Dublin pillory.

The Dublin pillory has totally vanished, used for many years after the stocks had ceased to be employed there is not, so far as I can ascertain, a trace of a pillory in Ireland; still I am able to show you an accurate representation of what our Dublin pillory was like, with the appearance of, I believe, the last culprit who figured before a Dublin audience in its embraces. This was the notorious Watty Cox, the editor of a journal remarkable even in its day for forcible and not very decorous language. I owe this drawing to the kindness of Mr. Longfield, who copied it for me from the original woodcut in the last volume of Watty Cox's magazine. You will perceive the place of exhibition was in front of the City Hall on Cork-hill; and as Cox himself superintended the execution of the woodcut, we may presume the scene was fairly represented. At an earlier date I believe the pillory was erected at the junction of Werburgh-street and Castle-street, the victim facing Fishamble-street, but it was always a movable apparatus and probably kept in the Tholsel.

The learned Coke states that everyone that hath a leet or market ought to have a pillory to punish offenders, such as brewers, bakers, forestallers, &c. By old English law, a baker making bread of light weight was punished for his first offence by loss of his bread, at the second time of offending by imprisonment, and further delinquency was punished by the correction of the pillory. This carried with it a degree of odium and degradation to the offender. I find in a legal record book, in manuscript, that eighty years ago a single individual in Ireland was sentenced to exposure on the pillory, imprisonment for six months, and transportation for seven years—cumulative punishments, all awarded to the same person.

In the 56th year of George III., the pillory was restricted as a punishment to perjurers alone; and, finally, in the first year of Her Majesty Victoria's reign, it was enacted:—"That from and after the passing of this Act (30th January, 1837) judgment shall not be given or awarded against any person or persons convicted of any offence, that such person or persons do stand in or upon the pillory.

*Dromore Stocks.*—I understand that Dromore still possesses its town stocks; they are erected on the rough stone from which formerly the old Dromore cross arose. This early cross lies broken and neglected, and some of its fragments are reported to be built into walls, but an effort is being made to recover and restore these scattered pieces. The stocks consist of two upright iron lateral supports, with a cross-bar of iron, having two semicircular apertures for the culprit's limbs; and there is a corresponding movable iron above, which is elevated by a lever passing over the top of one of the supports, and connected with the lower bar by a long iron rod; when the limbs were secured this was fastened with a padlock opposite the lower half of the stocks. My informant, when a lad, says he often had his feet in them; but as an instrument of punishment they have been disused for many years. The culprit sat on a stone, which he believed was part of the shaft of the old cross.

P.S.—The Christ Church Stocks, in the year 1761, stood at the junction of the south transept, with the eastern wall of the Choir in Christ Church-place, where its situation is delineated in an old map of the "Liberties of Christ Church."

**LXII.—ON A BRONZE COOKING VESSEL FOUND SEVERAL YEARS SINCE IN A BOG NEAR KELLS, PRESENTED TO THE ROYAL IRISH ACADEMY BY THE MARQUIS OF HEADFORD. By WILLIAM FRAZER, F.R.C.S.I., Member of Council of the Royal Irish Academy.**

[Read, February 8, 1886.]

A SHORT time since the Marquis of Headford kindly informed me he would present to this Academy a Bronze Cooking Vessel, which for several years past had been in the possession of his family, since its discovery in a bog in the vicinity of Kells. It was sent to my charge, and at his request is now added to our collection of Irish Antiquities.

Every contribution of this description possesses a certain value for illustrating the history of our nation in former times, with reference to art knowledge, and comparative advance in civilization. Cooking vessels such as this, cast in bronze or brass, are not uncommon. Sir W. Wilde, in his Catalogue of our Museum, records seventeen examples. He has given an illustrative figure of one which bears a date 1640, and I would ascribe this specimen to about the same period. Since his catalogue was published our list has increased to twenty-four, the present completing the 25th of our bronze vessels of this description. In addition to the ordinary use for cooking food, there can be little doubt that such vessels were often utilized for distilling on a limited scale, hence their discovery, concealed in bogs and lakes, becomes intelligible. Their capacity, as might be expected, varies within wide limits; some are so large that they are capable of holding several gallons of liquid; thus the large cauldron which Sir W. Wilde figured holds no less than nine gallons, but this is exceptional. The present specimen is one of medium average size. Its circumference in its widest part is 46 inches; it measures  $11\frac{1}{2}$  inches across its orifice, and stands  $14\frac{1}{2}$  inches in height. It rests upon three feet, each decorated with raised ribs, one rising on each side of the foot and the third centrally, the outer ribs diverging at the upper part, where the legs join the body of the vessel, being the ordinary mode of decoration. Sometimes we get vessels of this description which have received injuries, and been skilfully patched with fragments of other disused or worn-out pots, attached in general by rivetting, and showing much ability in the artist who repaired them, and likewise the value attached to the vessel by its owner.

The Academy will, I am certain, express its obligation to the donor for this addition to our Museum. The acquisition of such objects by large collections, such as ours, enables them to be arrayed in juxtaposition with numbers of similar articles, so that they can be studied as a group, and deductions made, which would be impossible if we are restricted to a few isolated specimens. In addition to this description of bronze cooking vessels, made by casting, we possess an earlier and highly interesting class of bronze cooking utensils, composed of beaten or cast plates of bronze rivetted together, of which we are fortunate to be able to exhibit several exceptionally good examples.

**LXIII.—CRANNOG OF LOUGH NA CRANAGH, FAIR HEAD, CO. ANTRIM.  
By ALEXANDER M'HENRY, M.R.I.A.**

[Read, February 8, 1886.]

THIS very perfect crannog is situated on a rock (basalt) foundation, nearly in the centre of the lake. It is oval in shape, and built of large loose blocks of basalt, well fitted together without cement of any kind. The surrounding wall is from six to eight feet thick, the central part of the crannog being rudely flagged at a depth of a foot or so below the present surface of grass and earth. A thick layer of bright red sand is found heaped over the inner courses of the wall all round, while in the centre of the crannog black charred sand occurs several inches in thickness, both above and below the rude flagging,

Extensive excavations were made in all parts of the crannog, but the only objects of interest found were a rounded flint—probably a hammer, or “muller,” a worked flint flake, and some decayed fragments of charred bones of ox and sheep. The length of the crannog is 126 feet by 85 feet wide; measurement all round outer edge of wall, 334 feet. On the north-west side, a landing-place about 6 feet wide remains visible, and on the south and east sides rude steps still exist. The height of the surrounding wall is generally 4 feet, very uniformly built and in good preservation. Average depth of water round it is 2 feet on the west, and 3 feet on the east sides. The nearest point of land is on the west side, about 50 yards distant. The lake is very shallow (4 feet generally) all over—as proved by soundings made—except in the south-east portion, where it descends to 20 feet, so that a cutting on its south margin, 6 feet deep, and 50 yards long, would drain almost the entire area, when, no doubt, objects of interest would be found embedded in the mud, in the vicinity of the crannog.

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LXIV.—REPORT ON THE EXPLORATIONS AT WHITE PARK BAY, BALLINTOY.  
By ALEXANDER M'HENRY, M.R.I.A.

[Read, February 8, 1886.]

I beg to lay before the Academy the results of my explorations at the above locality, and to hand over the specimens obtained.

At White Park extensive excavations and searchings were made in the dark-brown sand deposits, capping the raised beach, resulting in the finding of the numerous Palæolithic remains laid before you, and which I now give over to the Academy.

This deposit of brown sand is exposed in several places along the shores of the bay, but principally in the central part of it, and from where the greater portion of the specimens were obtained.

It varies in thickness from a few inches to a foot and a-half, and is undulating and irregular in its deposition. The dark-brown colour of the sand is, no doubt, due to the numerous fires which were burned on its surface at the time of occupation by the Palæolithic people, as is evidenced by the finding of hearths of burnt stones, charred wood and bones, &c.

White Park was evidently an extensive flint implement factory, and permanent camping place of the people of the Stone Age. It possessed many advantages for such in the way of material for the manufacture of arrow and spear-heads, &c., and rich pasture for cattle, as well as being sheltered, and having a good water supply from springs, while all round the base of the adjacent chalk cliffs numerous and extensive caves existed, affording shelter in bad weather or from the attacks of an enemy.

The plateau of brown indurated sand occurs about 40 or 50 feet above the present sea level, and was originally very extensive. It is now covered in parts by accumulations of blown sand, while a great portion of it has been carried away by denudation. Its indurated character has, however, tended to preserve it in many places, where it stands out in relief as small hills and platforms.

Worked flints, flint flakes (wasters), and cores are very abundant and may be picked up in hundreds round the slopes of the platforms of brown sand.

The highly-finished flint scrapers, or skin dressers, and arrow or spear-heads are not so numerous, and but fifty odd specimens were obtained, some of them showing good dressing. The few arrow and spear-heads found are but unfinished examples.

Numerous round chalk flint pebbles are to be found, from hazel nut size to 4 inches in diameter; probably they were used as heating-stones for cooking purposes, or as hammers in the dressing of arrow-heads and other implements.

Pottery fragments were procured in abundance, varying from  $\frac{1}{4}$  to an inch in thickness; unfortunately no whole examples could be met

with ; but from the pieces found, some idea can be formed of the size and shape of the originals. A few ornamental pieces were obtained, which show an attempt at artistic design.

The material used in the manufacture of the pottery I believe to have been the Lias mud and shale which underlies the chalk in the immediate vicinity.

Bones of various animals are also very numerous, the limb bones being invariably smashed and broken, evidently for the purpose of extracting the marrow. They are of ox, sheep, goat, pig, dog, and red and fallow deer, as well as of smaller animals.

A human lower jaw, evidently of an aged female, and an arm bone (*humerus*) were also found associated with the pottery and flints.

Various sized and shaped stone hammers and crushers were also gathered; some are of quartzite and chalk flint, but they are principally of basalt.

Three examples of querns or corn crushers ("saddle querns") were found. The finest specimen I took with me. It is a sandstone, and well suited for grinding grain, hollowed along the centre from long use, and measures  $19 \times 12 \times 5$  inches. The other two were of basalt, but not well preserved.

I also procured a very good specimen of a top crushing or grinding-stone (or "muller") of basalt.

Close to the "saddle quern" a bored stone ("whorl stone") was dug out. It is  $1\frac{1}{2}$  inch in diameter,  $\frac{1}{4}$  inch thick, and composed of hard red grit.

Small heaps of recent shells—principally limpet—are here and there to be met with, associated with the other remains. They are evidently the kitchen middens of the Palæolithic people.

Mr. W. J. Knowles of Cullybackey, Co. Antrim, was the first to notice this interesting locality, of which he gives an account in the *Journal of the Anthropological Institute* for 1880.

I feel satisfied that further search at this place will yield most useful results by assisting to throw additional light on the manners and customs of the old Celtic inhabitants of Ireland.







LXV.—DESCRIPTION OF THE BRASS MATRIX OF AN ANCIENT SEAL BELONGING TO THE AUGUSTINIAN HERMITS, WITH AN ACCOUNT OF THE MONASTERY OF THE HOLY TRINITY, NEAR DUBLIN, AND OBSERVATIONS ON THE SYMBOLISM OF THE CRESCENT MOON AND STAR. By WILLIAM FRAZER, F.R.C.S.I., Member of Council of the Royal Irish Academy. (Plate XXIV.)

[Read, February 14, 1887.]

IN the reign of Henry III., A.D. 1259, a colony of Friars of the Order of Hermits of St. Augustine arrived from England, and, under the alleged patronage of one of the Talbot family, acquired a domicile outside the walls of Dublin. They erected a church, monastery, with suitable outbuildings and gardens, and had a cemetery: in fact developed around them an ecclesiastical foundation of considerable importance, which constituted a centre for discipline, and college of all the other establishments connected with their Order over Ireland. This church and its associated monastic buildings was situated on the banks of the Liffey to the east of the Poddle river, which was a wide open stream, liable to sudden heavy floodings, from which St. Patrick's Cathedral and the low-lying portions of the city often suffered. It was erected in close proximity to, perhaps on the exact site, where the Medical School of the Catholic University now stands.

The city of Dublin was restricted within narrow limits for three or four hundred years after the Norman invasion. The entire outlying district now occupied by Dame-street and College-green, from the walls of the Castle of Dublin to the grounds occupied by Trinity College, consisted of suburban lands stretching along the side of the river, which was a broad estuary about double its present width; and even down to so recent a period as the thirty-eighth year of King Henry VIII., when our monastic institutions were suppressed, there remained in possession of these monks three orchards and ten gardens, situated in the parish of St. Andrew's, and four acres of meadow, and a park of four acres near Hoggin-green, now College-green, together with several other properties, such as tenements located within the precincts of Dublin and landed possessions scattered over different parts of the country. According to another account they held their outlying parks and gardens as under-tenants of the "mayor and bayliffs" of Dublin, at a yearly rent of six shillings and eightpence, and were bound to contribute to the Vicars Choral of St. Patrick's a sum of two shillings and sixpence annually, payable out of the profits of their cemetery.

Our city records state that, A.D. 1309, Roger was Prior of the Augustinian Hermits, and his name appears as one of the witnesses who gave evidence against the Knights Templars. Thomas de Carlow

was Prior in A. D. 1328, and John Bebe, in A. D. 1357, filled the office of Vicar-General of his Order.

Possession of the Church, with the monastic buildings and grounds attached to it, when it became suppressed under Henry VIII., passed to Walter Tyrrell, a Dublin merchant. His heirs assigned it to Walter Crowe, who, in the year 1597, held the appointments of Chalcographer and Chief Prothonotary to the Irish Court of Common Pleas, and here he erected his "Crowe's Nest," for such he quaintly termed his residence. Sir William Petty became its tenant in A. D. 1654, and set to work with unwearied energy to accomplish his Survey of the Forfeited Estates. He completed his series of maps within the brief period of thirteen months, and commenced the sale and distribution of Irish lands to the soldiery of Cromwell and the English adventurers.

The Dublin Philosophical Society, a venerable predecessor of our Royal Irish Academy, in 1684, took rooms in the "Crowe's Nest" for the purpose of holding scientific meetings. They established our first Botanic Gardens, a Museum, a Laboratory, and, like ourselves, read papers on literature, on scientific questions and antiquities, for which a comprehensive scheme of procedure was drawn up by Primate Marsh, Sir William Petty, Dr. Willoughby, and William Molyneux.

*Tempora mutantur.* In 1731, a music hall is erected to replace alike the old monastery and society of learned academicians; instead of lectures, fashionable assemblies are held and riddotos. The change proves a decided success, and the delighted supporters, sympathising with the sufferings of the poorer classes in our city, founded, in the year 1743, the Hospital for Incurables, which excellent institution has up to the present time continued to carry on the charitable work thus inaugurated. Then Spranger Barry took a lease of the ground and erected Crow-street Theatre. On its stage appeared Sheridan, Mossop, Macklin, Ryder, Miss O'Neil, Edmund Kean the Elder, and a host of other theatrical notabilities. In turn it fell into decay, and on its ruins rose a medical school belonging to the Apothecaries Hall of Ireland. Finally these premises passed into possession of the Catholic University, and are occupied at present by their Medical School.

Such is a rapid sketch of the chequered history, during six hundred years, of a piece of ground situated almost in the centre of our city; and as a justification for my having recalled these circumstances, I submit to the Academy the matrix of a brass ecclesiastical seal of early date, almost as early as the commencement of my tale, which belonged to Augustinian Hermits, and was placed in my hands to describe, through the kindness of Rev. Canon Leeper, Incumbent of St. Audeon's parish, and of Rev. C. T. M'Cready, M.R.I.A.

This matrix consists of a circular plaque of brass (Pl. XXIV., fig. 1). It is unusual for ecclesiastical seals to be made in this shape; they are more often of compressed oval form. In transverse measurement it is almost 2 inches across, its exact size being 1·85 of an inch; attached is a short thick handle of elegant outline, perforated by a trefoil. The

engraved work of the figures represented and the symbols and sunken letters of the inscription are executed with considerable skill, and must have been done by an artist of more than average ability. Occupying the central portion of the seal we observe four tonsured and corded monks, who are attired in appropriate costume, two on each side facing inwards, and regarding with elevated hands the crescent moon, above which there is a star. The different forms of expression which the die-sinker has brought out in the faces of these little figures are full of vitality, and their distinctive Roman tonsure, costume, rope girdle, &c., are worked out with minute faithfulness. The inscription which is placed on each side of the figures was difficult to explain in a satisfactory manner. I obtained interesting suggestions from Mr. E. M. Thompson, of the MSS. Department in the British Museum, who has charge of the Collection of Early English Seals, but the reading did not appear altogether clear.

Above the figures of the four monks there is engraved a crescent moon embracing a star within its horns. A star, when appearing as a symbol in religious representations, must be considered to denote John the Baptist, the forerunner of Christ, and the crescent moon is commonly accepted as emblematic of the Virgin. In a subsequent portion of this paper I will refer at greater length to certain circumstances which appear deserving of being noticed with reference to both these symbols.

The inscription around the edge of the seal, which constitutes its distinctive motto and serves to connect it with the Augustinian establishment of Hermits, is free from ambiguity. (See Plate XXIV., fig. 1.)

It is fortunate the matrix is in such a perfect state of preservation so that every facility is afforded for forming an opinion about the approximate date of its fabrication. The style of lettering employed must be considered when endeavouring to decide this question, also contraction marks used to denote the abbreviation of certain words, and the mode of punctuation. Taking all circumstances into account, I am disposed to refer it to an early or middle period of the reign of Edward III. (A. D. 1327 to A. D. 1377). It would be a matter of little difficulty to select out of any cabinet of coins groats and silver pennies belonging to that reign which present forms of lettering identical with those traced on the die, and the relationship becomes strengthened and more decided when, as stated, marks of contraction and of punctuation are likewise studied. Due weight must furthermore be given to the double aspect under which the letter N is represented in its English and Lombardic forms: indeed the points of resemblance between the inscriptions on coins of Edward III. and this matrix are so striking that one might be led to conjecture it was either the handiwork of some of that king's moneyers, or at least fabricated by an artist trained in similar principles of metallic engraving. The authorities of the British Museum appeared inclined to refer it to an earlier date, either Edward I. or Edward II.; whichever period be

adopted, its age becomes determinable within a space of about fifty years.

On referring to Allemand's work on the *Monastic History of Ireland*, published in Paris in 1690, we observe there a brief notice of the Dublin monastery, which differs in certain details from the account I have already given, based on the authority of Archdale's *Monasticon Hibernicum*. Allemand states:—

“Aux Portes de Dublin et sur la Rivier Liffie qui y passe il y avait au Prieuré de Chanoines Reguliers de Saint Augustin qui fut fondé l'an 1219, par un Seigneur Anglois nommé Varinus de Pech, et Varæus remarque que cette Maison fut depuis unie à l'Abbaye de Saint Thomas de Dublin de Chanoines Reguliers de St. Victor.”

Rev. Canon Leeper and Rev. C. T. M'Cready, M.R.I.A., to whom I am indebted for an opportunity of examining this seal, and of laying it before the Academy, have informed me it was supposed to have some connexion with the Chantry of St. Mary, which belonged to our ancient Dublin Church of St. Nicholas Within, at present, and for many years past, in ruins. This chantry was founded so late as the ninth year of King Edward IV., and printed copies of the original charter or deed in Latin have been published more than once. In point of date it is evident a chantry of the time of Edward IV. is far too modern to have any claim of ownership to a seal made in the reign of Edward III.

To refer more particularly to the subject of emblematic representations of a crescent moon and star. So far back as B.C. 390, we find a crescent represented upon certain coins of Boeotia, on which it figures as a symbol connected with devotion to “Aphrodote Melaina.” Again, upon other Grecian coins of later date, the conjoined emblem of a star and moon crescent make their appearance. Thus upon certain types belonging to Cydonia, struck about B.C. 200 (which are figured in the recent publication on the coins of Crete, by the authorities of the British Museum), both symbols are present.

One of the earliest coinages in Ireland, struck by King John, is of special interest in immediate connexion with this subject; it affords representations of a crescent moon associated either with a blazing star between its horns, or a small cross is placed in that position instead of the star, occurring on the reverse of the coins, and situated within a triangle. Mr. Haig, writing in the “Numismatic Chronicle” for 1839 (subsequently quoted by Dr. Aquilla Smith in his paper on the full-faced coins of John), considers both star and moon are symbolic of John the Baptist—a view with which I cannot altogether concur. Upon the surface of this early seal we observe four Augustinian hermits, looking upwards, and regarding a moon and star with every appearance of special reverence; and to this day, in different parts of our old Cathedral of St. Patrick's, we are able to recognise identical symbols preserved intact on its walls.

At the present time a crescent and star would become associated in the minds of the public with its appearance on a Turkish standard, and

be supposed to have certain special relations with the Empire of the Sultan. The victorious Turks, when they seized possession of Constantinople, merely took over the sacred type from the Greeks, and, beyond having appropriated it by right of conquest, I do not believe a star and crescent moon can be considered to represent any fact or circumstance relating to Turkish history of the slightest interest or significance. The question assumes a different aspect altogether when we are concerned in investigating early religious symbolic history of the eleventh and twelfth centuries: at that time the crescent, with included star, was regarded as an important and distinctive sacred emblem. Thus to quote a brief extract from a Close Roll of the 35th year of Henry III., published by Mr. Thomas Duffus Hardy:—

“Edward of Westminster is commanded to order a banner to be made of white silk, and in the centre of the banner there is to be a representation of the Crucifixion, with the effigies of the Blessed Mary and Saint John, embroidered in orfraies, and on the top a star, and a new moon crescent, and the said banner to be ready by Easter.”

An obvious deduction appears to suggest itself: accepted by the Greeks, and appearing impressed on their coins, as indicative of devotion to Venus Aphrodite (a worship believed to have been transmitted through Phœnician and Cyprian sources from Assyrian shrines) somehow, in later ages, the venerated symbol of crescent moon and star was revived, adopted for a distinctive Christian emblem, and appropriated to denote the Virgin and John the Baptist. At what exact time, or under what circumstances, the practice originated, it is needless to inquire; it is found to prevail, without distinction, alike in the Churches of the East and West. We have to deal with it as adopted by Augustinian hermits who, as I have stated, formed their early settlement near the city of Dublin, by King John, when he visited this country and struck silver coin for Irish circulation, and further, as a favourite decorative ornament, painted on the walls of our Cathedral of St. Patrick. I restrict myself to these examples of its adoption; for it would be found, if we inquired respecting other Irish localities (principally I believe where Templar knights and Augustinian hermits had their settlements) similar symbols would be discovered, and the most probable common bond of connexion which appears traceable in such cases is a close relationship with that powerful and unfortunate association, the Knights of the Temple, whose history is associated with the origin and erection of almost all the great ecclesiastical establishments which were built consequent on the Norman Conquest of Ireland. They founded their grand Priory at Kilmainham in the year 1174, and it is their lands which now form our Phoenix Park. Its principal founder was Richard Strongbow, Earl of Pembroke; this same earl was one of the chief benefactors for augmenting and re-edifying Christ Church Cathedral, with which his name appears inseparably associated, so that popular tradition appropriates a monument to his memory which, by no possibility, could ever have belonged to him, but commemorates a totally different individual, who lived much later than

the days of Strongbow—a Templar knight of rank, whose name and history have alike perished. The historic fact is unquestioned, of the remains of Strongbow having been interred within the precincts of Christ Church, and during last year a tombstone of much interest was discovered covering a tomb enclosed by stone blocks, in the course of Mr. Drew's excavations when searching for sites of old monastic buildings formerly belonging to that Church. It lay within the dilapidated walls of the Chapter House, and underneath its great eastern window, preserved from destruction by the accumulated *debris*. The monumental slab represents a lady with regal coronet on her brow; her headdress resembles that of Joane, a natural daughter of King John, married to Llewellyn, *ap.* Jorweth, who lies buried in the Monastery of Clanvaes, North Wales. This monument I would ascribe to Strongbow's regal consort, Eva.

Templar emblems are usually similar to those on the seal I have described—a crescent moon, with star—but the type is found to vary; the star may be replaced by a simple cross or by one in which the cross is surrounded by a halo of diverging rays, or the crescent and cross are represented with a star situated on either side of the cross. King John's political relations with the Knights of the Temple may serve to explain his adoption of their distinctive symbols on his Irish coin, where both the crescent and cross, and crescent and star are reproduced. He relied on their assistance during King Richard's absence at the Crusades, and when in captivity, and they appear to have supported John's claims to the crown—a proceeding that would not commend their order to succeeding English monarchs; and when their doom was sealed the Prior of this Dublin monastery was produced to secure their condemnation.

In further confirmation of an intimate connexion having been maintained between Templar Knights and Augustinian Monks, the following quotation is given from the works of Nicholas Gurtler, in his "*Historia Templariorum*":—

"*Tantum addo Templarios in primordio institute conciliis et auctoritate Hierosolymitani Patriarchæ professos esse more Canonicorum regularium se victuros, istos vere Augustini regulam habuisse.*"

During the excavations, which were carried on at Christ Church by Mr. Drew, two conjoined bronze ornaments were obtained, which I exhibit by his permission; and I am indebted to him for a drawing representing them of full size (Plate XXIV., fig. 2). When placed in my hands I recognised their relation to the emblems seen upon King John's coinage, and it was the occurrence of similar symbols upon this bronze seal which induced me to prosecute the inquiry further and investigate the connexion which crescent moon and star had to the Order of the Temple and to Augustinian Hermits.

In these antique bronzes I believe we possess a veritable survival of ornaments once worn by some Templar retainer, within the precincts of Christ Church, upwards of five hundred years ago. All pictorial representations of similar emblems have long since disappeared from

the walls of Christ Church, which can be explained by repeated alterations in its structure, unlike St Patrick's Cathedral, where, as I have already said, they maintain their place. These little ornaments recall to our memory a distant and long-vanished era in Dublin history, so remote that its houses may have then contained living men who could recollect a time before Norman knight garrisoned its walls or steel-clad Templars had possession of priory or church in Ireland.

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#### NOTES ADDED IN THE PRESS.

In the course of the discussion on this Paper, and in subsequent correspondence, several important suggestions were made. The Most Rev. Bishop Donnelly read the inscription as *DEFINITORES*, which satisfies the requirements of the lettering, and will explain its ecclesiastical significance. This explanation is borne out by referring to the Glossary of Du Cange, who describes such officers as exercising the function of visitors, officials whose duty it was to maintain monastic oversight. According to Du Cange, the word is sometimes written *DEFINITOR* and *DIFFINITOR*, both being equivalent to Visitor.

By the kindness of Rev. J. A. Nowlan, O. S. A., St. Augustine's and St. John's, Dublin, I am informed that *Four* Definitors "form the Council of each Provincial. They come into office by election with the Provincial; and go out of office with him. The term in Ireland is for four years. The Provincial seal passes from the outgoing to the incoming Provincial. At the time this seal was used there was no Irish Provincial, but the convents here were subject to the Provincial of England." He, however, informs me it is quite possible some monk, residing here at the time, may have exercised the office of visitor, and become possessed of the seal, in virtue of his office.

Mr. J. J. Digges Latouche, Deputy Keeper of our Irish Records, has made a valuable suggestion about this seal worth being considered, that possibly it may have belonged to Archbishop Browne, who was Provincial of the Augustinian Order in England at the time of the suppression of their monasteries, and was appointed Archbishop of Dublin in 1535. My object has been to describe the seal, leaving its ownership an open question; and as there is no positive evidence to disassociate it from the Irish Establishment, which was the principal branch here, under the English Provincial jurisdiction, it appeared appropriate to connect the seal with some record of their past history in this city.<sup>1</sup>

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<sup>1</sup> In Gilbert's "History of Dublin," see Appendix to vol. ii., there is a memorandum from the State Paper Office, London, containing a list of the possessions of the dissolved Monastery of Augustinian Hermits in Dublin, and also an extract made by the late Sir William R. Wilde, taken from the *Transactions of the Dublin Philosophical Society*.



## LXVI.—ON LOCH BETHA, CO. DONEGAL. By G. H. KINAHAN.

[Read, January 11, 1886.]

IN the *Annals of the Four Masters* we read of Loch Betha, which is situated in the present parish of Gartan, Co. Donegal. The earliest notice of it seems to be in A. D. 1257, when one of the O'Donnells was confined in its crannog for twelve months, while being healed of wounds he received when he fought near Sligo. We afterwards hear of this crannog during the internal wars of the O'Donnell sept. In 1524, one Eoghan O'Donnell took the crannog from a Niall O'Donnell; and then again, in 1540, it was besieged by an O'Donnell, who was repulsed; but he returned in the fall of the year, took it, broke it up, and completely demolished it.

What lake this "Loch Betha" of the old annals may be is the subject of the present inquiry. In the parish of Gartan, at the present time, there are two lakes called "Lough Beagh" on the Ordnance maps, or, as they are pronounced commonly, "Lough Veagh," B in Donegal being generally sounded like V. Ordinarily the northern lake is known in the county as "Lough Beagh," and the southern as "Gartan Lough;" but a very old man in the village of Lacknacoo, Edward Gallagher by name, insists that the proper name of the northern lake, where he was born, is Glenbeagh Lake, and that of the southern Derrybeagh Lake, and that the latter was more ancient (*i. e.* famous) than the first.

The present circumstances of the lakes would appear to suggest that Mr. Gallagher is correct. In the neighbourhood of Glenbeagh Lake there are now no prominent antiquities. High up the glen in the woods there is said to be the site of Mulroony M'Graddy's cell, a saint whose romantic death has given the name of Straggraddy to the hill west of Barnesbeg (see *Folk-lore Journal*, vol. iii., pt. iii., p. 274); while at the north-eastern end of the Lake there are some small islands, one of which might have been that referred to; but none of them look like a crannog. This, however, is not the case when we go to examine Derrybeagh Lake, as in connexion therewith are various structural remains that would appear to point to its being a place of some note in olden times.

To the north-east of the lake, extending out from the southernmost point of the hill, called the "Bridge Island," or "The Glebe," is a line of stones, now known as "Saint Columbkille's Stepping-stones," while 200 yards from the point is a group, called the "Giant's Grave," as a giant is said to have been buried there when destroyed by his enemies; but nothing more about him is now known. The map exhibited, taken from the Ordnance, shows the position of this group. A little north-west of the "Giant's Grave," occupying

the most southern point of Roshin, are the remains of a small cashel or stone fort. (Note in press, p. 474.)

Further south-west, on Lough Island, are the remains of what appear to have been a castle or fort. This island seems to have been joined to the mainland in old times by a *cash* or *balloch*, on the site of the present ford. Still further south-westward, on the mainland, a little north of the south-west end of the lake, there are the ruins of a rather large stone fort, called on the Ordnance map "Cashel Fort." These are evidently ancient structures; but, besides them in the lake, are two or three small islands, one of which, Gallagher's, or Gull Island, at least may have been a crannog; but nothing positively can be said without explorations.

In the country immediately south of the lake there is the remarkable butte called Crockraw, *anglice*, "Hill of the Fort," and a precipitous mass of rocks called Carrickmoroghyduff, both of which were evidently at one time fortified. The same thing may be said of the butte called "Doon," in Glendowane, to the south-west, while on the summit of Tullybeg, to the east of the north-east end of the lake, are the remains of a *hiss*, or clay fort.

All these habitations show that the place must at one time have been of some importance; but there are yet others, as in the valley to the north we find, on the brow a little west of Loughnacally, in the townland of Lachnacoo, one of those primitive cells usually dedicated to a saint: this being called after the Columbkille who, the country people say, "was born at Kilmacrenan, educated at Douglas (a few miles southward of Derrybeagh Lough), and buried at Gartan." This cell is a very primitive structure, being of a four-sided, roundish form, with a short passage entrance to the north-east, the walls being rude flagstones, scarcely more than two feet high. Close alongside is a large flagstone called St. Columbkille's Bed, of an irregular roundish shape, its maximum length and width being about eight and six feet; it is remarkable for the numerous cups (about ninety) cut in it, as shown in the rubbing exhibited. This flagstone appears to me to have been formerly the cover-stone of the cell. The cups are from a quarter of an inch to two inches in depth, and of various diameters. For the sketch of the remains of the cell and of St. Columbkille's bed lying alongside, I am indebted to Mr. J. A. Mahony of Ramelton.

Further north and immediately adjoining the village of Lachnacoo there is a *bullán*, or bruising corn-mill,<sup>1</sup> cut in a roundish stone; this is now smothered up in a break of ferns. A little westward of it, on the opposite brow of the stream, in a rock surface, are two small cups, while some distance further north-east of Lough Akibbon are the ruins of St. Columbkille's church, abbey, and well, with two or three very rude stone crosses, all of which are very much dilapidated, and

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<sup>1</sup> Some of these are in use at the present day in the county Donegal, the pestle being of iron, made by one of the country smiths.

present no very remarkable features. To the north of Lough Akibbon, on the summit of the drumlin, in the townland of Whitehill, there was a large fort. It should also be mentioned that near the eastern shore of Lough Akibbon there are some small islands, with stone ramparts around them; the latter, however, have an aspect as if they might be modern structures to protect the islands from cattle when the water of the lake is low.

From the above records it will appear that Derrybeagh lake would seem to have been a more important place than Glenveagh lake in ancient times. I am therefore inclined to believe that it must have been the Loch Betha of the ancient annals.

#### NOTES ADDED IN PRESS.

The "Giant's Grave" looks as if it might have been the site of a crannog; but, after a careful examination, in the summer of 1886, when the lake was very low, I came to the conclusion that the stones in it, and the "stepping-stones," are the remains of the south-western extension of the "Bridge Island" drift-hill. The ancient stronghold of the O'Donnells, I suspect, must have been on the now so-called "Lough Island." Gull Island, however, has very much the appearance as if it was artificial.

#### UNRECORDED CRANNOGS IN CO. MAYO.

**CASTLEBAR LAKE.**—In Castlebar Lake, to the west of the town, there is a *crannog* now known as Boyd's Island. Before the lake was lowered, about twelve feet, it was an island, but now it is joined on to the mainland. In the Geological Survey memoir it is recorded by Mr. R. G. Symes. After it became high and dry it was ravaged by the itinerant rag and bone merchants, who turned it over and carried away everything that they could convert into money. In the lake were found a dug-out canoe that used to be in the yard of the Castlebar gaol, the horns of a megaceros, and several heads of the red deer. The canoe is now in the Royal Irish Academy's Museum.

**MOHILL LAKE.**—This lies a few miles southward of Westport, alongside the public road to Erriff. In this lake there is an unexplored *crannog*, and it cannot be explored unless the water of the lake was lowered.

#### Co. DONEGAL.

**COLUMBKILLE LOUGH**, a mile east of Milford, an island near the north shore, that seems to be a *crannog*.—This is said to be joined to the land by a cash, or path; but as the lake is now dammed up, and used as a mill-pond it was always so full when visited, that the

island could not be examined. On the north shore is "St. Columb's Chair," and on the east shore were stones, now removed, called the "Giant's Grave." On the west of the lake are some large stones that appear to be the remains of a megalithic structure.

SESSIAGH LOUGH, a mile and a-half south-east of Dunfanaghy.—In the western portion of the lake there is a circular *stone crannog*; it is built of flaggy limestones and quartzites, boated from the mainland, and was surrounded by a stone rampart, with an entrance to the eastward. It could not be satisfactorily examined, as the lake has been converted into a mill-pond, by damming up the *embouchure*, thus raising the level of the water. Also, some years ago, the tenant of the adjoining land boated soil on to its surface, to make of it a cabbage garden. On account of the height of the water, no kitchenmidden, or any of its surroundings, could be seen or examined. To the north-west of the lake, on the rise of ground, is the site of one of the M'Swine's castles.

FORT LOUGH, a mile south-east of Castleforward, and immediately north-east of the main road from Derry to Newtowncunningham.—A *crannog* discovered when the adjoining bog was drained and the water of the lake lowered: previously there was a tradition that there was a castle buried in the lake. This crannog is mentioned, in "Irish Lake Dwellings," as being in Fort Lake, Co. Derry—mistakes evidently due to Mr. and Mrs. Hall. In Castleforward Deerpark, to the north of the lake, there was a large round flag, supported horizontally on uprights, the surface of the flag being cupped ("M'Pharlan's Statistical History"). At the present time the flag is broken, and at least half carried away, the uprights have also been removed, except one or two. A native who lived hard-by called it a "Giant's Grave."

As these crannogs are not mentioned, or only slightly, in Colonel Wood-Martin's work on Irish lake dwellings, it appears expedient to draw attention to them here.

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LXVII.—ON TWO SEPULCHRAL URNS FOUND, IN JUNE, 1885, IN THE SOUTH ISLAND OF ARRAN. By the REV. DENIS MURPHY, S.J.

[Read, January 26, 1886.]

I BEG leave to call the attention of the Academy to the two sepulchral urns which are exhibited here to-day. "Finds" such as these are not uncommon in different parts of Ireland: indeed, there is in the Museum of the Academy a considerable number of such urns. But these two have been met with under such circumstances, that I thought an account of the "find" might not be unwelcome to those members of the Academy who are interested in the study of archæology.

The Islands of Arran, off the coast of Galway and Clare, are well known to contain some of the most interesting monuments, both pre-Christian and Christian, in the kingdom. Dun Enghus, on Arranmore, one of the many forts, has been said by competent authority to be the oldest non-sepulchral stone monument in Europe. It is only those who have seen it and examined it closely that can form any idea of its extent and grandeur, as well as of its admirable fitness for the purposes of defence for which it was originally intended. Our learned President, Sir S. Ferguson, was, I think, the first who in recent times called public attention to the wonderful things to be seen at Arran. Many years ago, at a time when the study of Irish archæology was by no means fashionable, when but a few, a very few, "like lamps shining in dark places," took any interest in such pursuits, he, in a series of articles in the *Dublin University Magazine*, which showed not only a great deal of historical research, but, what was still more important as things then were, a heartfelt anxiety for the preservation of these monuments, called attention to them, and, I may say, originated that public opinion and concern the outcome of which has been that they have been examined, repaired, and placed under such care and control as will hand them down as they now are to the remotest times.

It was my good fortune to be able to spend a considerable time on these islands last summer. When I visited the south island, which also goes by the name of Ara Cæmhin, the island nearest to the coast of Clare, in the beginning of July, I found the superintendent sent by the Board of Works completing the repairs of the old Castle of the O'Briens and of the wall that surrounds it, probably a remnant of Cahir-namhan, a dun which formerly stood on what is now the site of the castle. The beautiful little church of St. Cæmhin, with the saint's *leaba* or cell close by, and the church of St. Gobnat in the middle of the island, had been already restored, so far as was needed to preserve them from further decay. I called the attention of the very intelligent clerk of works—a namesake of mine, by the way—to a mound or hillock

close to Tragh Kiera. This is a small sandy beach on the north side of the island, the only place where a landing can be effected in any but very fine weather. On examination the mound was found to be surrounded, at a depth of some ten feet from the surface, by the foundation of a thick wall, roughly built of large stones, without any sign of mortar. Very probably it is to these stones that the existence of the mound at present is due, for the whole space near it, to the extent of a mile or more, is covered with a drifting sand, which is being carried on-wards by the west and south-west winds—these are most prevalent on the island—to the east shore. When the foundations were laid bare, and the whole circle of the cashel was opened up, on digging a little into the

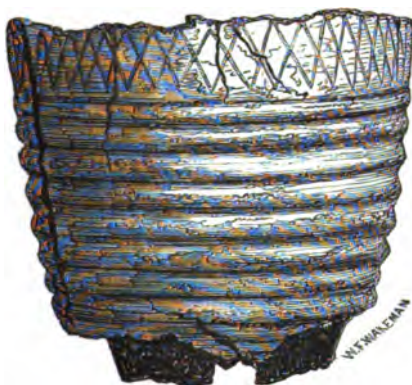


Fig. 1.

mound inside this wall, we came on some tall stones, four feet in height set on end, and enclosing a circular space of about five feet in diameter. We set about clearing away the sand between them, and at a depth of three feet from the top of them and ten feet from the surface of the mound we came on the smaller of the two urns (fig. 1). We removed the sand around it very carefully, hoping to be able to raise it whole and without a break from its position. But when it was touched, ever so gently, it fell to pieces, as if it were made of sand. These we put together carefully, bit by bit, and you have the result here—not, indeed, a very artistic piece of work, but yet betokening, I think you will admit, some small degree of patience and interest for science on the part of the finders.

Continuing the search within the same stone circle, we soon came on another and a larger urn (fig. 2). The first is not more than six inches in diameter at its widest part. This is twelve inches in height, by eleven in diameter; it is larger than any in the Museum, with one exception, an urn in the Petrie collection. The smaller of these urns would seem to have been open at both ends. There was nothing whatever under or over either that would lead one to suppose that its shape was any other than what it now is. They were probably placed *in situ*, their present contents put in, and the sand put round and over them. The



Fig. 2.

fractured state of the smaller urn will not allow us to judge well whether it had any sort of ornament carved or impressed on it, as is usual in such vessels; but the circular mouldings and the diamond pattern on the larger urn are almost, if not quite identical with those on the urn in the Museum marked No. 20, which the catalogue says was found in the great tumulus of Rath.

The contents of both urns were bones, a substance like charred peat, and sand. The sand will have fallen in owing to pressure from above as the other substances decayed gradually. I have submitted some

particles of the bones to an expert for examination. He does not think they were ever subjected to cremation, since certain parts are found in them that would have been consumed necessarily if at all subjected to the action of fire. But this opens up another question, namely, what were the modes of burial among the Irish in pre-Christian times? There is surely no one that will not join in the expression of regret of Professor Sullivan, that O'Curry was not spared to deliver his intended series of lectures on this subject, in continuation of those on the Manners and Customs of the ancient Irish.

As regards the inscribed stone lately found, I shall only say that it has been already described at sufficient length by Miss Stokes in her valuable work on *Irish Inscriptions*. It is there said that the stone was destroyed. I am happy to be able to say that it has been found inside the large church of the Holy Ghost, one of the seven churches on the large island, close by the western gable.

May I be allowed to call attention also to a curious old document on vellum, bearing the date of 1588, not mentioned in O'Flaherty's *Iar Connaught* or elsewhere, so far as I know. It refers to the south island of Arran; for in it the mayor and bailiffs of Galway testify that "Morrough M'Tirlagh O'Brien and his ancestors were temporal captains of the islands of Arran and their territories time out of mind, and continued therein until expelled of late by the usurping power of the O'Flahertys; and that he and his predecessors did at all times aid and abet the townsmen of Galway against the enemies of the Crown of England."

In conclusion, I submit for inspection:—Drawings of the Fort on the south island of Arran, where the urns were found; a rubbing of the inscription on the stone lately re-found; a rubbing of the famous VII. Romani inscription; and the testimony of the Mayor of Galway mentioned above.

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**LXVIII.—DESCRIPTION OF A CRANNOG SITE IN THE COUNTY MEATH.**  
 By Lient.-Colonel W. G. WOOD-MARTIN, Fellow and General Secretary R.H.A.A.I.

[Read, June 28, 1886.]

**COOLNAHINCH** (*the angle of the island*).—In this townland<sup>1</sup> Mr. Owen Smith, of Nobber, discovered a crannog on the eastern side of a small bog, called Monalough (*the bog of the lake*), situated in the parish of Moynalty, and about two miles north of the village of the same name. On the edge of the swamp there is a small hillock, still called by the country people "the island," which is remarkable for its fresh green appearance, contrasting pleasingly with the bleakness of the surrounding moor. It is distant four perches, or about thirty yards, from what is described as "dry land," i.e. the ancient shore of the lake; and the space being greatly "cut away" leaves it, and indeed the entire bog, in a very swampy state during the winter months. The hillock, or site of the crannog, is now about four feet above the morass, and when closely examined is found to consist of several heaps of stones, which are about the size of those used in repairing the public roads; from their appearance they would seem to have been subjected to an intense heat. Around the hillock was a circle, showing in some places a double row of stumps, of thick stakes of black oak, which penetrated the bog to a depth of several feet. These were more clearly observable on the face of some of the turf banks, which have encroached on the original area of the crannog; but the obliteration of the site has recently progressed at such a rate that the stakes have now disappeared, with the exception of the few shown on the plan (H) at the south-eastern corner. The greatest length of the crannog (A-B) from N. to S. is now twenty-two paces; its breadth (C-D) from E. to W. seventeen paces.

The faces of the bog-holes, when examined, appear to be pure clay, mixed with branches of some kind of wood; now, however, quite spongy and rotten.

Why the country people should take the trouble of cutting away what would seem to be quite useless as fuel is fully accounted for by the fact, that underneath this layer is found the best of *black turf*, and to get at it is necessary to dig through and clear away a depth of four feet of earth and stones, the artificially piled up work of the constructors of the former crannog. The labour of the turf-cutters was, in Mr. Smith's opinion, amply repaid by the quality of the fuel

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<sup>1</sup> Since writing this Paper I find that owing to the squaring of the townlands the crannog site is now actually in the denomination of Quiglagh, and not in the townland of Coolnahinch.—*Vide sketch Map.*

which he observed still remaining in clamps on the banks: it was of that dense black peat found occasionally at the bottom of bogs, hard and heavy as coal (a tooth of an ox was embedded in one sod); for though it had been exposed to the winter frost and rain it was per-

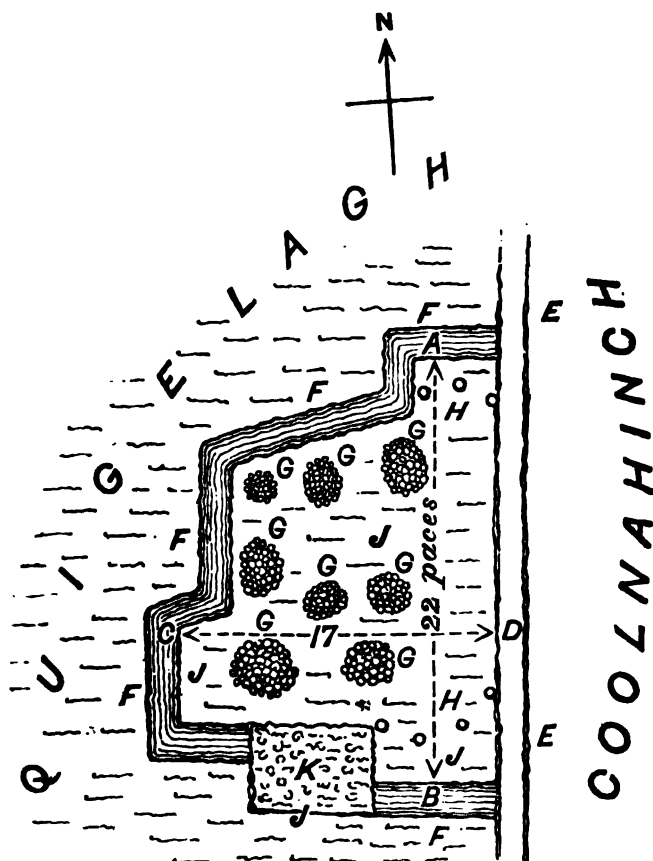


Fig. 1.

Sketch Map of the "Island" adjoining the townland of Coolnahinch, by C. B. Jones, c.s., M.R.H.A.A.L.—A-B, 22 paces; C-D, 17 paces; E, E, Fences; F, F, F, F, F, Bog-holes; G, G, G, G, G, G, Heaps of Stones; H, H, Rows of Stakes; J, J, J, where Carbonized Vegetable Remains were excavated; K, probably Site of Refuse Mass.

fectly unaffected by them. The inference seems plain—that the crannog was erected when the growth of peat, which finally filled up the lake bed, had already been some time in process of formation; that the layer underlying the crannog had been artificially compressed by the

superincumbent structure: thus the nineteenth century native of Coolnahinch is now profiting by the labours of countlessly removed past generations, and is quite unconsciously using fuel that may be considered in part artificial.

It may be here noted that the foundations of the submarine crannog at Ardmore, discovered by R. J. Usher (see *Lake Dwellings of Ireland*, p. 216), rested on a growth of peat over a marly substratum. One of its mortised beams here delineated (fig. 2) is almost a *facsimile* of those shown at p. 247 of *Lake Dwellings of Ireland*; at p. 74 of *Ancient Scottish Lake Dwellings*; at pp. 6 and 437 of *Lake Dwellings of Switzerland*.

The remaining surface of the crannog of Coolnahinch—strewn with detached heaps of stones, all bearing marks of fire—is very uneven; but as it is higher than the level of the surrounding tract, it is much used by the peasantry as a drying-ground for their turf; and to serve as protection from damage by cattle a fence (EE) has been formed along the eastern side. The stones on the surface of the crannog are a kind of sand, or rather pudding-stone, that is not



Fig. 2.

Beam from Ardmore Submarine Crannog, 1 foot 4½ inches in length, in the possession of R. J. Usher.

common in the locality, the prevailing rock being grey slate. On the western side of the island these heaps are largest; on the eastern or fence side (EE) the surface dips considerably. Over this part of the crannog there has grown (of course since it was deserted) a layer of brown fibrous peat, known in the locality as "slane turf." This "slane" is about two feet thick along the fence; but it fines off towards the centre, where it disappears.

Carbonized vegetable remains, with masses of charcoal, were found with the calcined stones all over the surface of the crannog, wherever the green sod covering the site was turned up; but the crannog is being rapidly turned over in the process of turf-cutting. Two years ago Mr. Smith found no difficulty in procuring quantities of this calcined vegetable matter, tolerably free from foreign mixture; for wherever the earth was exposed for any time to the weather, the rain washed the earthy matter away, leaving the grain quite clean, except for a few pebbles and bits of charcoal. On repeating his visit lately, Mr. Smith was not so successful: the grain on the crannog

had almost disappeared; but on examining the sides of the bog-holes he observed the layer cropping out. With the sample thus obtained we have to do.

Almost all the remains were carbonized; the majority seem (according to Professor Perceval Wright) to belong to a barley of the same small size as found in Swiss lacustrine sites (*Hordeum hexastichum densum*, and *H. hexastichum sanctum*). There were, however, in addition (apparently not carbonized) a few fruits of one of the Docks (*Rumex*). These may have got into the *debris* accidentally, or they may have withstood the effect of time. Stones of some small fruit, like those of sloes and cherries, also showed no traces of fire. Pliny states that the sweet cherry was first introduced into Europe from Pontus by Lucullus; that in about a century it had spread as far as Britain. Traces of carbonized oats, shells of the hazel or oak-nuts (it is sometimes not easy to distinguish between them) were met with in abundance.

Some of the grain is very small, not larger than the hayseeds now grown by farmers—not for their *seeds*, but to be consumed as hay. “This, to my mind,” adds Mr. Smith, “shows how much our crops have been improved by cultivation.” In this respect the “find” may be useful. I cannot quit the subject without drawing your attention to a quotation from the *Annals of the Four Masters*, under the year 1031, relative to the price of food in former times:—“A *sesedh*<sup>1</sup> of oaten grain; or a third of a measure of black-red sloes; or of the acorn of the brown oak; or of the nuts of the fair hazel hedge, was got without much bargaining at *Ard-macha* for one penny.”

The reason I quote this is, that remains of all these were found on the site of the crannog. Out of the bog-holes encircling it have from time to time been thrown an astonishing quantity of bones of cattle, sheep, &c. All the larger bones were, as is usual in lacustrine middens, much broken, and in the spot marked K, being probably the site of the kitchen-midden, or refuse heap, the largest supply was procured.

Some objects of antiquarian interest have been turned up during the process of turf-cutting. In 1885 a man named Cole, while engaged in this occupation near “the island” (as the country people still call the crannog), was severely wounded in the naked foot by some object concealed in the peat. He stooped down and pulled “something like a dagger” out of the bank, and with an oath flung

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<sup>1</sup>“Grain found on Swiss Lacustrine sites,” observes Dr. Uhlmann, “was often only slightly burnt; this was more especially striking in the case of the larger grained barley. From this we may conclude that a large proportion of the corn had been intentionally roasted and stored for food. This agrees with several facts recorded of the inhabitants of Palestine.”—Leviticus, ii. 14; xxiii. 14; Ruth, ii. 14; Samuel, xvii. 17. *Lake Dwellings of Switzerland* (Keller), 2nd. ed., p. 190.

it into an adjoining bog-hole, that was being filled up by the debris of the one at which they were working; also a "brass hatchet" was found some years ago by a man named Brien. The remains of a rath are observable near the edge of the bog on the mainland. It is only noteworthy from its situation being on low ground, "a far-seeing hill" being the kind of site more commonly selected for similar structures; for the same condition of existence, which led men to live on heights surrounded by earthen banks and palisades, induced others to found dwellings surrounded by almost similar defences on the water.

However, these crannog sites in small marsh lakes are very remarkable; for if the question be asked, why these dwellings were erected in such diminutive sheets of water, it is difficult to give a conclusive and satisfactory answer, either as regards facilities for the subsistence, or the greater security of their occupiers. These lakes were shallow, with foul bottoms, on which the peat was already accumulating; therefore the fish were comparatively small and few in number. The sites selected were usually close to the shore; therefore the distance could be easily bridged over by an enemy. The water not being deep, and its surface sheltered from the wind, it was probably frozen over for more or less lengthened periods every winter—an opportunity for facilitating pillage, eagerly to be embraced by an enemy. Crannogs thus situated would, however, give comparative security from a sudden surprise during the non-winter period, and would be, perhaps, as secure as a fort or doon even during a severe frost, such as the *Irish Annals* chronicle as occurring in 1156, when Roderick O'Connor had his boats dragged over the ice from *Bleis Gaill* to *Rinn Duni*, in the Co. Leitrim, where the site of a crannog has been discovered opposite the castle of the same name.

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**LXIX.—ON AN OGHAM MONUMENT AT RATHCOBANE, IN THE COUNTY OF CORK.** By the Rev. EDMOND BARRY, P.P., Rathcormac.

[Read, 28 June, 1886.]

ON the 9th of October, 1885, in going from Rathcormac to hold a station at the house of (Little) John Carey of Ballyrobert, in the extreme south of my parish, I noticed a coffin-shaped stone lying on the top of the southern ditch of the second field, to the east of John Carey's house. Remembering that at Island and elsewhere I had seen similarly shaped stones inscribed in Ogham, I turned aside to examine the stone for an inscription. I could see none on the angles exposed to view; but on running my hand down through grass and briers I felt regular grooves low down on the off-side of the stone, and knew that I had there an Ogham inscription.

After the station, Mr. Carey and a dozen more accompanied me to the stone; some to turn the stone or tell its history as far as they knew; the rest through curiosity. The ditch on which it lay is the parish boundary, here separating the farm of John Carey of Ballyrobert, in the parish of Gortroe, united to Rathcormac parish, from the farm of James M'Grath of Rathcobane, in the parish of Templebodan, united to the parish of Lisgoold, all in the barony of Barrymore, in the county of Cork. From time immemorial the stone had lain in the dyke, or gripe, at the Rathcobane side of the boundary-ditch, till shortly before my visit John Carey, by leave of James M'Grath, removed it from dyke to ditch preparatory to breaking it in pieces, in order, with the fragments, to roof a gullet. In the stone's bed in the dyke Mr. Carey found two or three fragments of "crockery," each two or three inches square. But neither in removing the stone, nor before, nor after, till I saw it, did anyone now living suspect that it bore an inscription. Mr. M'Grath remembers, however, that in his father's time a labourer named Fitzgerald used to insist that there was writing on the stone; but then, as Fitzgerald was wholly illiterate, no one heeded him.

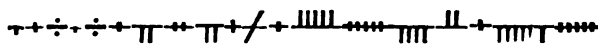
The field, in a dyke of which the stone so long lay, is called Parkadallane: that is, *Ṗaṛic an ṽallán*, the Field of the Pillar-stone. According to Mr. M'Grath it has its name, not from the inscribed stone, but from an uninscribed flag, that crops out of the ground to a height of three feet towards the S. W. angle of the field. Indeed, not *ṽallán*, but *lía* is the Irish word for an Ogham-inscribed stone; as, for instance, in the *Lebar na h-Uidre*, and in the *Book of Leinster*. Then, as *ṽall*, and also *ṡoll*, means blind, possibly what *ṽallán*, anciently *ṡallán*, properly means is a blind

(in the sense of uninscribed) monumental stone, such as the flag in question. Cormac's *Glossary*, however, derives the word *gallán* differently.






No doubt the fragments of pottery found beneath the stone were fragments of the cinerary urn that held the ashes of the pagan chieftain whose mutilated name the stone still bears. Doubtless, too, the spot where headstone and shattered urn together lay was that chieftain's grave. From the contiguity of the pagan monument to the parochial boundary, one might speculate on the probability that in time the monument became a landmark, and was such to the earliest builders of the boundary ditch. Further, as these builders did not run their ditch over the pagan's grave, nor left the grave to their sunless left, but to their honoured right, it looks as if they too were pagan, and the ditch a civil or political boundary at first, though afterwards utilized for ecclesiastical purposes, when *tuaths* became parishes. However that may be, we may not suspect these builders of being the Vandals by whom, in a vain search for gold, the grave was rifled, the urn broken, the ashes scattered, and the headstone prostrated.<sup>1</sup>



The inscribed stone is of fine grey sandstone. It is six feet long. Its left inscribed face is one foot three inches wide six inches from the top, and gradually narrows to eight inches at six inches from the bottom. The right inscribed side is four inches wide at six inches from the top, and gradually widens to ten inches at the middle, whence it narrows to eight inches at a foot from the bottom. The left inscribed face of the stone has so scaled away that the long scores there are all in the last stage of shallowness, and are nearly all in part effaced, though all still unmistakably discernible. Except where chipped from violence of ancient date, the right face is smooth. Its smoothness might be taken for the polish of the glacial period, or of river action, only that the extreme difference of present depth of scores one from another at this side shows that here, since the first formation of the scores, the surface of the stone has insensibly been reduced, in some parts more and in others less, through some such cause as atmospheric action, or the rubbing of cattle, or the sharpening of weapons.

There is only one line of inscription. The inscription begins at two feet from the bottom; is two and a-half feet long; ends one and a-half foot from the top, and is as follows:—

  
 A? I? L O L A M A Q I S D A N B I  
 (Ai) lola Maqi Sdanbi. Of (Ai) lill, son of Sdanb..

<sup>1</sup> It may be noted here that at the old castle of Rathcobane, on the same farm as Parkadallane, stone implements were found in the present Mr. M'Grath's father's time.

All the scores of -lola Maqi Sdanbi are certain. The six scores, immediately preceding the final I, have to be read NB  rather than SL , FF , LS , or BN ; because the interval between the last two adjacent scores is the widest, being one-tenth wider than that between the first, or the second, or the fourth two, and fully one-fifth wider than that between the third two.

Of the scores before "lola" I noticed none on the first day on which I examined the stone, nor on the second, though each day I searched for them on the hypothesis that "lola" was only part of what in the Irish of books and manuscripts is Ailella or Oilella, genitive singular of Ailill or Oilill, one of the best-known early Irish names of men. On my third visit, which had for object the taking of a paper cast of the inscription, Mr. M'Grath pointed out to me three ancient incised lines, and a rough notch, as, in his opinion, part of the inscription. Previously I had searched for scores along the line of junction of the smooth and scaly surfaces, which line I had too inconsiderately taken to be throughout identical with the angle-line of the stone, the fleisc of the inscription. On close inspection, however, that line of junction is seen not to cross the scores equivalent to O, as should the fleisc, but to skirt their left extremity. Next, instead of touching, it keeps off two-thirds of an inch from the scores equivalent to L No. 1, and must have kept still further off when the scaling was less. Certainly, then, this line, which possibly had no existence till the scaling began, is not here the fleisc of the inscription. From the extremity of L No. 1 the true line of inscription runs across a fissure to where are the scores first recognized by Mr. M'Grath; but there, from some cause or other, the angle-line has been so bevelled and levelled, that of the six or seven vowel notches originally there barely the bottom line remains of three, with wider but rougher, and not more distinctly oghamic, traces of another. Between every two adjacent scores of these there is an interval of  $1\frac{1}{4}$  inch, which is double the interval between the fourth of them and the adjacent score of L, or between the two scores of the character equivalent to O, and more than double nearly every other interval between adjacent scores in the inscription. This double width of interval forbids the combination of the four into one character—E. By supplying a score for each of the three double intervals we should in all have seven, which might be read , that is Oi, spelled with which diphthong the name Oilill appears twelve times in the Index to the *Annals of the Four Masters*. By leaving unfilled the first double interval, by way of separating one vowel character from the other, we should have six, thus: , that is Ai, the diphthong with which the name appears forty times in that Index.

In the Book of Genealogies in the *Book of Leinster*, Ailills are too numerous to count. But amongst them is no Ailill M'Sdanbi. Only one of the Ailills there might be said with probability to have resided



in the territory of Ui Liathain, now the baronies of Barrymore, Imokilly, and Kinnatalloon, in the very centre of which territory are the death memorials of Ailill M'Sdanbi. That one was Ailill Tassach, son of Eochaid Liathan, and third cousin of St. Patrick's convert, Cengus, king of Cashel.

Ailill M'Sdanbi must have died since the birth of Christ; for, in eghams of a date little anterior to the birth of Christ, Ailola would have been Ailolas, like Lugudeccas, Cunanetas, &c.

In the same stage of development or decay of the Irish language as that to which Ailola belongs, were that stage uniform as regards *s* of the nominative, and *s* of the genitive case ending, the nominative of Maqi should be Maqo, or, as it certainly is on the Ballyquin inscription, nominative Moco, for which is Magu on one of the Dromloghan stones. Similarly the nominative of Sdanbi should be Sdanbo. Later on, when Mago, Macco, Moco, Magu, &c., became Mac and Mag, Sdanbo would have been shortened to Sdanb or Sdanbh, like Banbh, Tarbh, Borb, Corb, &c. In O'Reilly's Irish-English dictionary the nearest word to Sdanbi is stan,  $\pi\tau\alpha\eta$ , *tin*, from Latin *stannum*, in which last form the second *n* probably represents some assimilated letter, possibly B.

Initial S is often lost, as in the case of Latin *stannum*, in German *sin*, and in English *tin*. Were the initial S of Sdanbi lost, the remainder of the word would differ little, in sound at least, from  $\tau\alpha\eta\text{bi}$ , an Irish word in the Serglige Conculaind—a word not yet translated.

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#### NOTES ADDED IN THE PRESS.

NOTE A.—Since this Paper was put to Press, I have seen at the Museum of the Royal Irish Academy the Ballyhank inscription, read as "Alal moqi Forartigurn," by Mr. Brash (*Ogham Monuments*, p. 141). The first word, which, however, is not Alal, but Alala, from its similarity to "lola" of the Rathcobane Inscription, claims notice here. Mr. Brash says: "This stone was much reduced from its original form and dimensions for the convenience of carriage" (pp. 141-2). And so below the first score of the inscription the stone now extends only half an inch, a margin insufficient to show that the inscription always began where it now begins, and that Alala is neither incomplete at the beginning, nor compounded of Lala, and the last score of the last character of some preceding word, such as maqi. Assuming, however, that in reducing the stone, the inscription was not reduced, and that Alala is as complete as its sculptor intended, it may be a form of what usually is written Ailella, or Oilella; for Dr. O'Donovan (*Irish Grammar*, page 17) gives a form of the nominative "Aulell," which points to an earlier Alull, whose genitive would be Alolla, whence the transition to Alala would be easy. Still easier

would be the transition to or from Alola, a form which may be seen on the Rathcobane stone, if, while rejecting "the ancient incised lines," mentioned above, one reads as A, the rough shallow notch, immediately preceding lola. Repeated examinations, however, of the Rathcobane stone tend to efface my first favourable impressions as to the oghamic nature of the notch, no less than of the scratches. A last hypothesis takes Lola as a complete word, the genitive case of Lul, just as Loga from Lug. And the word Lul seems really to have existed, as the name Lulach (for whose genitive Lulaig, see *Book of Leinster*, p. 51 $\beta$ , and 336 $\beta$ ) seems formed from it.

NOTE B.—Also, in the *Book of Leinster*, I have come across a nominative form, of the name of which Sdanbi, of the Rathcobane Inscription, is a genitive form. It is Staniub, an *alias* of Fineen, ninth in descent from Mugroin, a lord of Offaly, who died in 782, according to Dr. Donovan in the *Annals*:—"Cuchocpiche m. Alin m. Finguine pope rem in Staniub m. Murchada," &c.—"Cucogry, son of Alin, son of Fineen; he was the Staniub, son of Murrough," &c. (*Book of Leinster*, p. 314, col. 8). The inscription then, is—Lola maqi Stanbi, Lul, son of Staniub, though possibly it was at first Alola maqi Sdanbi, Ailell, son of Staniub.

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LXX.—THE PRAETORIAN PREFECTS AND THE DIVISIONS OF THE ROMAN EMPIRE IN THE FOURTH CENTURY, A.D. By JOHN B. BURY, M.A., F.T.C.D.

[Read, December 13, 1886.]

It is recorded by all modern historians that Constantine the Great divided the Roman Empire into four prefectures—Gaul, Italy, Illyricum, and the East—and thereby instituted four praetorian prefects instead of two. As to the division of the empire into dioceses, it is now generally admitted that we must ascribe it mainly to Diocletian; the details may have been afterwards modified by Constantine. But historians feel no more doubt that Constantine definitely instituted the four prefectures than they feel that such a person as Constantine existed.

When we ask what testimony exists to justify this certainty, we find that the only authority for the statement is the assertion of *Zosimos*, Bk. ii. c. 32 :

συνετέραξε δὲ καὶ τὰς πάλαι καθεσταμένας ἀρχάς . . . Κωνσταντίνος δὲ τὰ καλῶς καθεστῶτα κινῶν μίαν οὖσαν ἐς τέσσαρας διέειλεν ἀρχάς. He goes on to enumerate the territories embraced in these four governments, and then says: ταύτη διελόμενος τὴν τῶν ὑπάρχων [*praefectorum praetorio*] ἀρχὴν καὶ ἄλλοις τρόποις ἐλαττώσαι ταυτὴν ἐσπούδασεν. Thus *Zosimos* makes the multiplication<sup>1</sup> of the praetorian prefects and consequent diminution of their power a subject of accusation against the Christian emperor. His statement as to the matter of fact is explicit; there can be no doubt about it. Historians are quite justified in accepting it as true—although *Zosimos*' authority is by no means unimpeachable—provided they find no conflicting fact, resting on authority, which may be looked on either as certain, or as less impeachable than *Zosimos*. If we do find a conflicting statement better attested, that of *Zosimos* must fall.

One thing, of course, is quite certain, namely, that the empire had been definitely divided into four prefectures before the end of the fourth century. The evidence of the *Notitia Dignitatum*, drawn up at the beginning of the fifth century, makes this as certain as any fact of history can be. The question is: Was it definitely enacted by Constantine, as *Zosimos* alleges, that four praetorian prefects should

<sup>1</sup> The number had never been definitely limited to two. Since the time of Commodus it was customary to appoint occasionally a third prefect: see Lampridius, V. Comm., *Praefectus etiam Ebutianus inter hos est interemptus; in cuius locum ipse Cleander cum aliis duobus quos ipse delegerat praefectus est factus. Tuncque primum tres praef. praet. fuere*; and Spartianus, V. Did. Jul., *Ipsos autem tertium fecit praefectum Veturium Macrinum*.

conduct the civil administration of the empire as governors of four large groups of provinces; or was such an enactment made either between the death of Constantine (337), and the accession of Arcadius and Honorius (395), or in the year 395, when the empire was finally divided?

Of the co-existence of more than two prefects there is no evidence in the *Codex Theodosianus* before the year 326 (see annexed Table). In the year 326 Constitutions are addressed to four different prefects:—

|                        |    |    |             |                |
|------------------------|----|----|-------------|----------------|
| Evagrius,              | .. | .. | February 11 | (IX., 3, 2).   |
| „                      | .. | .. | April 25    | (IX., 7, 2).   |
| „                      | .. | .. | May 17      | (XII., 1, 13). |
| Acindynus,             | .. | .. | February 15 | (VIII., 5, 3). |
| Ablabius, <sup>1</sup> | .. | .. | June 1      | (XVI., 2, 6).  |
| „                      | .. | .. | Sept. 18    | (XIII., 5, 5). |
| Secundus,              | .. | .. | June 29     | (XV., 1, 3).   |

Hænel, in his *Series Chron. Const.*, mentions also three other praetorian prefects under this year; Bassus (II., 10, 4); Rufinus (XIII., 3, 2); Philippus (VIII., 7, 3): but the dates of these laws are doubtful. Godefroy mentions Constantius as praetorian prefect in 326, but incorrectly; he was praetorian prefect in 327 (II., 24, 2). But we cannot conclude that four praetorian prefects held office simultaneously. The only conclusions that we are entitled to draw literally are, that Evagrius and Acindynus were both prefects in February; and that Ablabius and Secundus were both prefects in June. It is possible that Evagrius and Acindynus were succeeded by Ablabius and Secundus. It is, however, probable, that there were three prefects in this year, administering three divisions of the empire: it cannot be proven, and there is no reason to suppose it probable, that there were four. In the years 328, 331, and 336, the names of three prefects are recorded. Thus in the *Codex Theodosianus* we find no evidence either to prove or to disprove Zosimos' statement.

On the other hand, we have a piece of evidence conflicting with Zosimos' assertion. A passage in Ammianus Marcellinus proves that no definite measure as to four prefects had been made before 365 A.D. In that year Valentinian succeeded Jovian, and chose his brother Valens to share the Imperial throne. The brothers met at Sirmium, and divided the empire, as is recorded by Ammianus, thus (XXVI., 5, 4):—

“Et post haec cum ambo fratres Sirmium introissent diviso palatio

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<sup>1</sup> This is the correct spelling: see C. I. L. III., 352, a letter of Ablabius, and two rescripts of Constantine and his sons to Ablabius, of which the second is dated 331; the first is probably to be assigned to 330.

ut potiori placuerat Valentinianus Mediolanum Constantinopolim Valens discessit."

And then he adds:—

"Et orientem quidem regebat potestate praefecti Sallustius, Italiam vero cum Africa et Illyrico Mamertinus, et Gallicas provincias Germanianus."

Thus in 365 there were only three prefects and three prefectures, Illyricum and Italia forming one, instead of two, as in later times. It cannot be said that Illyricum merely means Pannonia and Dalmatia (the dioecesis of occidental Illyricum, as it was called in later times, when it formed one dioecesis of the Praefectura Italiae), and that Ammianus merely omits to mention the fourth prefect because he may have been a person of less importance. For in the first place we have no reason to suppose that Pannonia and Dalmatia were separated from the rest of the Balkan peninsula, and closely connected with Italy until 395; and, in the second place, Ammianus evidently intends a complete enumeration, as we can see if we consider why he introduces the remark in this place. It is evidently to be taken closely with the foregoing *diviso palatio*; the prefect of the Gauls, and the prefect of Italy, Africa, and Illyricum, were to be responsible to Valentinian—the prefect of the East to Valens. The division of the officers implied and determined the division of the empire. Ammianus does not express this in so many words, but he does not leave it in any doubt, as he says that Valentinian's capital was Mediolanum; that of Valens, Constantinopolis. Had there been a fourth prefect of Illyricum (Moesia, Dacia, Macedonia, and Achaia), and had Ammianus omitted him, he would have left his readers in doubt to which of the brothers Illyricum was assigned.

The evidence of Ammianus is borne out by an inscription, which shows that Claudius Mamertinus had been praetorian prefect of Italy and Illyricum in the year 362–363. This inscription was found at Concordia, and contains the following words (C. I. L., v. 8987):—

"Disponente Claudio Mamertino viro clarissimo per Italiam et Illyricum praefecto praetorio."

Mamertinus is also mentioned in the Theodosian Code, *De Numerariis*, lex 8.

But if it is certain that in the years 362–365 there were only three prefects, it is equally certain that immediately before Mamertinus there were four. Taurus was praetorian prefect of Italy from 354 to 361, as is proved by the laws in the Cod. Theod. But we know from Ammianus that Anatolius was praetorian prefect of Illyricum 359–360 (xix., 11, 2, "Anatolio regente tunc per Illyricum praefecturam"; and xxi., 6, 5, where his death, and the succession of Florentius, are recorded). In 361 both Taurus and Florentius, the successor of Anatolius, were superseded (cf. xxii., 3, 4, and 3, 6). Ammianus

does not tell us who succeeded them under Julian's régime, but as Mamertinus was praetorian prefect in 362, we may suppose that he was their direct successor, created perhaps at the same time as Secundus Sallustius, or shortly after. In the first months of Julian's reign we find him empanelled as assessor to Sallustius, *quaestionum agitandarum*, and perhaps this implies that he was not yet prefect: *xxii.*, 3, 1, "Brevi deinde Secundo Sallustio promotō praefecto praetorio summam quaestionum agitandarum ut fido commisit: Mamertino et Arbitione et Agilone atque Nevitta adjunctis itidemque Jovino," &c. This commission dealt with the officials of Constantius, and one of their acts was to send Taurus into exile.

This fact, that after the accession of Julian, Mamertinus became sole prefect of Italy and Illyricum, which had in the immediately preceding years been governed by two prefects, proves that no definite administrative arrangement had been made fixing or limiting the number of praetorian prefects; and as a consequence of this there was no definite division of the empire into prefectures except in so far as custom prescribed. I may add that the territorial division followed the number of the officials, and not *vice versa*. Valentinian and Valens did not primarily divide the land—they divided the *palatium*.

Having thus established that Zosimos' statement is not correct, we may proceed to examine the mode in which the multiplication of praetorian prefects, and their assignation to particular parts of the empire arose.

Diocletian's division of the empire is generally called a quadripartition, but it was essentially a bipartition. Diocletian was Augustus of the whole Eastern half, including the dioceses of the Pannoniae and the Moesiae; under him the Caesar Galerius had a delegated sway over a certain part. Similarly Maximian was Augustus of the West, and Constantius his representative in Gaul.

Praxagoras, who lived in the early part of the fourth century, and wrote a history of Constantine the Great, gives the arrangement of territory thus (Müller, F. H. G., iv. p. 2):—ὁ πατὴρ Κωνσταντίνου Κωνσταντῖος Βρετανίας ἐβασίλευσε, Μαξιμῖνος (Maximianus) δὲ τῆς Ρώμης καὶ τῆς ἄλλης Ἰταλίας καὶ Σικελίας, ὁ δὲ ἕτερος Μαξιμῖνος (Galerius Maximianus) τῆς τε Ἑλλάδος καὶ τῆς κάτω Ἀσίας καὶ Θράκης. Διοκλητιανὸς δὲ ὁ καὶ τῶν ἄλλων πρεσβύτατος τῆς τε Βιθυνίας ἤρχε καὶ τῆς Ἀραβίας καὶ τῆς Λιβύης καὶ τῆς Αἰγύπτου ὅσῃν ὁ Νεῖλος ἐπερχόμενος ἄρδει. Macedonia, Dacia, and Pannonia are not mentioned, but they, doubtless, went with Hellas and Thrace.

But we must not be misled into thinking that this was equivalent to a quadripartition of the Empire. For Constantius and Galerius were merely helpmates of the Augusti—merely governors of very large provinces, with the prospect, however, of becoming Augusti themselves at some future time. There was no strict division between the provinces ruled by Diocletian and Galerius, such as there was between the dominions of the two Augusti. Diocletian was as constantly in the Balkan peninsula as in Egypt or Asia, and Maximian was

sometimes in Gaul; whereas the Caesars could not leave their provinces except at the bidding of the Augusti. The East and West had each one, not two centres.

I think we are justified in supposing that the centralisation was strict; that there was one treasury, one hierarchy of officials, in each half of the world. I believe I can point to a distinct proof of this in the circumstances related by Eutropius in regard to the division which took place after the resignation of Diocletian and Maximian (305). Eutropius, x., 1:

"Divulsusque inter eos [Constantius and Galerius] Romanus orbis ut Gallias Italiam Africam Constantius, Illyricum Asiam Orientem Galerius obtineret, sumptis duobus Caesaribus. Constantius tamen contentus dignitate Augusti Italiae atque Africae administrandae sollicitudinem recusavit: vir egregius et praestantissimae civitatis: divinis provincialium ac privatorum studiis fisci commoda non admodum affectans," &c.

By these words Eutropius cannot merely have meant that Constantius, instead of holding court in Italy as Maximian had done, remained in Gaul—a post of less honour—and assigned Italy and Africa to Severus as his representative there. They must rather mean this: instead of taking upon himself the care of the whole Western world, Italy and Africa as well as Gaul (just as Maximian had administered Gaul as well as Italy and Africa), he confined himself to Gaul, and gave to Severus the entire administration of Italy and Africa; so that, but for the difference in title, Severus was on a par with Constantius.

This arrangement meant the institution of two centres, two exchequers, and two sets of officials, in the West. And therefore from this year (305–6) I would date the usage of three praetorian prefects. The special mention of this act of Constantius implies that Galerius did not place Maximian in the same position.

But in 308, when Maximian and Constantine were recognised as Augusti by Galerius, there were four Augusti. It follows that there were four centres, and four sets of officials. This state of things lasted (Licinius succeeding Galerius) until 312, in which year, by the battle of the Mulvian Bridge, Constantine became sole master of the Western world. But we may suppose that he found it convenient to continue the double set of officials for Gaul and Italy. In 313, Maximian was defeated and died, and Licinius may have also continued the double set of officials. But in 315, after Licinius' defeat at Cibala, a change was made in the distribution of dominion. Dardania Moesia, and Macedonia (Eutropius, x., 5) were added to the dominions of the Western Augustus: Moesia here means Upper Moesia, for Anonymus Valesius says that Licinius retained "the East, Asia, Thrace, Lower Moesia, Scythia (Lesser)"; and Zosimos says "Thrace and the East," which is the same thing.

We may suppose that after this new division Licinius had only one praetorian prefect, and one set of officials, and that Constantine

placed his acquisitions under the jurisdiction of the praetorian prefect of Italy.

In March, 317, Constantine elevated Crispus, his son by Minervina, and Constantine, his eldest son by Fausta, then a mere child, to the rank of Caesar. The fact that Crispus gained a victory over the Frangi in Gaul in 320 makes it possible that Constantine assigned to him the special care of Gaul. But in 321 he was in Illyricum with his father, while Nazarius was pronouncing an oration (*Panegyricus Constantino*) at Rome, in which the victory was celebrated. In 323 Constantius, then about seven years old, received the title of Caesar; and in the same year Licinius was defeated at Adrianople.

As we saw above, there is some evidence in the Theodosian Code, which may be taken as indicating—though it by no means proves—that in some of the following years (326 and 328) there were four praetorian prefects. According to Eutropius, special provinces were assigned at this time to the Caesars. Eutropius, x., 6, “*Eo tempore res Romana sub uno Augusto et tribus Caesaribus quod numquam alias fuit; cum liberi Constantini Galliae Orientis Italiaeque praessent.*” If this statement is accurate, we may deduce that Constantine reserved the special care of Illyricum and Thrace for himself. As to the distribution among the children, it is not so easy to decide. As Crispus was put to death probably in 326, this statement must describe the state of things from 324 to 326. I would suggest that Crispus continued to be governor of Gaul; that the child, Constantius, was nominally governor of Italy, under the immediate supervision of his father, and that Constantine reigned in the East. Now Constantius must have been governor in Gaul at sometime previous to 333; for Julian, in his *Ἐγκώμιον εἰς Κωνσταντίον*, says:—*πατέρα τὸν σὸν διανοηθέντα φαίην ἂν εἰκότως τοῖς Κελτῶν ἔθνεσιν ἐπιστῆσαι, σὲ φύλακα καὶ βασιλέα, μεираκίον ἔτι, μᾶλλον δὲ παῖδα κομιδῇ τῷ χρόνῳ, ἐπεὶ τῇ γε συνέσει καὶ ῥώμῃ τοῖς καλοῖς κάγαθοῖς ἀνδράσιν ἐνάμιλλον ἥδη.* We may, perhaps, conclude that after Crispus' death in 326, Constantius was appointed governor of Gaul. What position the eldest son, Constantine, occupied at this time we have no means of knowing with certainty.

In 333, Constans, the third son, became Caesar, and in 335, the year of Constantine's tricennalia, Dalmatius, his nephew, received the same title.

We have now reached the very difficult question as to Constantine's division of the Empire among his sons and nephews. It is so involved, and the conclusions of modern historians vary so much, that we cannot do better than quote all the evidence bearing on the subject. But we may first note that there are two special points which must not be confused. (1). What was the actual arrangement made in 335? (2). What was the arrangement made by the sons when the nephews had been put out of the way? These two divisions are often confused. There is a further question, whether Constantine made any testamentary enactment to be carried out after his death.

(1). Eusebios, *De laudibus Constantini*, c. 3. The panegyrist



describes how Constantine raised his sons and nephew successively to Imperial rank, ἐφ' ἐκάστη περιόδῳ δεκαετοῦς πανηγύρεως ἓνα τινὰ τῶν αὐτοῦ παιδῶν ἐπὶ τὴν τοῦ βασιλικοῦ θρόνον κοινωνίαν προχειρίζοντας, and divided the government of the empire among them, thus accomplishing the prophecy of Daniel (vii. 18), καὶ διαλήφονται τὴν βασιλείαν ἅγιοι ὑφίστανται.

Ὡς δὲ μὲν ἡμῖν τοῖς τὴν ἐφ' ἑαυτοῦ λαχοῦσι τὸν ἐπάξιον αὐτοῦ καρπὸν θάτερον δὲ τῶν παιδῶν θατέρῳ γένει τῶν ἀνθρώπων καὶ πάλιν ἄλλον ἀλλαχόθι λαμπτήρας οἷα καὶ φωστήρας τῶν ἐξ αὐτοῦ προχομένων φώτων διενείματο· εἰθ' ὑπὸ μίαν ζεύγλην βασιλικὴν τεθρίππου τέτταρας ὑποζεύξας αὐτοὺς ἑαυτῷ οἷα τινὰς πώλους τοὺς ἀνδρειοτάτους Καίσαρας ἡνίαίς τε αὐτοὺς ἐνθίου συμφωνίας τε καὶ ὁμονοίας ἁρμοσάμενος ἀνωθεν ὑψηλῶς ἡνιοχῶν ἐλαυνεῖ ὁμοῦ τὴν σύμπασαν ὁσπινὴν ὁ ἥλιος ἐφορᾷ διίππευον αὐτὸς τε τοῖς πᾶσιν ἐπιπαρὼν καὶ τὰ πάντα διασκοπούμενος.

As the panegyric was written and pronounced a few months after the arrangement of 335, this passage is of the highest importance. It proves that the four Caesars were coequal, and that each had a special government.

(2). Eusebios, *Vita Constantini*, iv., 51. ὡς οὖν ἑκατέρων τῶν ἄκρων τῆς ὅλης οἰκουμένης ἐκράτει τὴν σύμπασαν τῆς βασιλείας ἀρχὴν τρισὶ τοῖς αὐτοῦ διήρει παισὶν οἷα τινὰ πατρῶαν οὐσίαν τοῖς αὐτοῦ κληροδοτῶν φιλτάτοις· τὴν μὲν οὖν παππῶν λήξιν τῷ μείζονι τὴν δὲ τῆς ἐφ' ἑαυτοῦ ἀρχὴν τῷ δευτέρῳ, τὴν δὲ τούτων μέσσην τῷ τρίτῳ διένεμε.

The Life of Constantine was probably written not long after the death of Constantine (May 22, 337); we may place its composition in the year May, 337–May, 338. The army had proclaimed the three sons Augusti, and refused to recognise the nephews, Dalmatius and Annibalian (September 9, 337); the Empire was, therefore, completely in the hands of the three Augusti; and Eusebios' words reflect this fact. It does not seem to me that we can fairly press κληροδοτῶν to imply that Constantine had left a will excluding Dalmatius from a share in the sovereignty.

(3). Sokrates, *Hist. Ecc.*, i., 38, ad fin. ὁ δὲ βασιλεὺς . . . . εὐφραίνεται τε ἐπὶ τοῖς γεγονόσι καὶ ἐπὶ τρισὶν υἱοῖς οὓς Καίσαρας ἀνηγορεύκει ἕκαστον κατὰ δεκάδα ἐνιαυτῶν τῆς βασιλείας αὐτοῦ, τὸν μὲν πρῶτον ὁμώνυμον ἑαυτοῦ Κωνσταντῖνον τῶν ἐσπερίων μερῶν ἀρχεῖν καταστήσας ἐν τῇ πρώτῃ δεκάδι τῆς βασιλείας αὐτοῦ· τῶν δὲ πρὸς τῇ ἑῷα μερῶν τὸν τῷ πάπῳ ἐπώνυμον Κωνσταντῖνον ἐν τῇ εἰκοσιετηρίδι κατέστησε Καίσαρα· τὸν δὲ νεώτερον Κωνσταντα ἐν τῇ τριακονταετηρίδι τῆς ἑαυτοῦ βασιλείας χειροτόνησεν.

Sokrates has combined two statements wrongly—the statement in Eusebios' *Vita Constantini* as to the distribution of the government among the three brothers, and his statement in the *Panegyricos* as to their elevation to the rank of Caesar. He does not mention the particular provinces assigned to Constans, nor does he allude to Dalmatius.

(4). Sozomen, *Hist. Ecc.*, ii., 34. ὁ δὲ βασιλεὺς ἤδη πρότερον εἰς τοὺς παῖδας Καίσαρας ὄντας τὴν ἀρχὴν διελὼν καὶ Κωνσταντῖνῳ μὲν καὶ

Κωνσταντι τὰ πρὸς δύσιν ἀπονείμας Κωνσταντίῳ δὲ τὰ πρὸς ἑω . . .  
διακομίσθη εἰς Νικομηδίαν . . .

διαθήκην τε ποιήσας τοῖς μὲν παισὶ διένειμα τὴν ἀρχὴν ὡς πρότερον·  
πρεσβεία δὲ τὰ μὲν τῇ πρεσβυτέρῳ Ρώμῃ τὰ δὲ τῇ ἐπωνύμῳ αὐτοῦ  
καταλιπὼν ἔδωκε τὴν διαθήκην τῷ πρεσβυτέρῳ ὃν ἐπαινέτην ὄντα Ἀρείου  
ἀγαθὸν δὲ τῷ βίῳ παρέθετο αὐτῷ τελευτώσα Κωνσταντία ἡ ἀδελφή· καὶ  
ὅρκον προσθεῖς ἐνετείλατο Κωνσταντίῳ δοῦναι ἐπειδὰν ἀφίκηται.

It would hardly be wise to infer from this that Constantine made  
a new division after 385, and before his death, excluding his nephew.  
Sozomen inaccurately refers the portion of affairs after Constantine's  
death to Constantine's arrangement.

(5). Zosimos, II., 39. πρῶτον μὲν ἐνείμαντο τὰ ἔθνη καὶ Κωνσταντίνος  
μὲν ὁ πρεσβύτερος ἅμα τῷ νεωτάτῳ Κωνσταντι τὰ ὑπὲρ τὰς Ἀλπεῖς  
ἅπαντα καὶ τὴν Ἰταλίαν καὶ Ἰλλυρίδα πρὸς τοῦτοις ἔλαχεν ἔχειν, ἔτι δὲ  
τὰ περὶ τὸν Εὐξείνιον πόντον καὶ τὴν ὑπὸ Καρχηδὸνα Λιβύην. Κωνσταντίῳ  
δὲ τὰ περὶ τὴν Ἀσίαν καὶ τὴν ἑσπῶν καὶ Αἴγυπτον ἐπετέτραπτο. συνήρ-  
χον δὲ αὐτοῖς τρόπον τινὰ Δαλμάτιος Καῖσαρ ὑπὸ Κωνσταντίνου κατασ-  
ταθεὶς ἔτι δὲ καὶ Κωνσταντίος ἀδελφὸς ὢν αὐτοῦ καὶ Ἀννιβαλιανός.

Zosimos gives here the division which the brothers adopted when  
they had been proclaimed Augusti by the army, Sept. 9, 337. Like  
Sozomen, he groups Constantine and Constans together, without dis-  
tinguishing their respective divisions. May we, therefore, suspect  
that here Sozomen and Zosimos had an earlier author before them,  
who also drew no line between the territories of Constans and Con-  
stantine? τὰ περὶ τὸν Εὐξείνιον πόντον must mean Thrace, Lower  
Moesia, and Lesser Scythia. συνήρχον, as von Ranke remarks, can  
only mean belonged to the Imperial house; for no author hints at  
any government assigned to Constantius, Constantine's brother.

It is hardly necessary to add that τὴν ὑπὸ Καρχηδὸνα Λιβύην  
means the diocesis of Africa—Carthaginian Libya, opposed to Libya  
east of Syrtes.

(6). Victor, *Epit.* 41. "Constantinus junior cuncta trans Alpes,  
Constantius a freto Propontidis Asiam atque orientem, Constans Illyri-  
cum Italiamque et Africam, Dalmatius [Mes. Dalmatiam] Thraciam  
Macedoniamque et Achaïam, Annibalianus Dalmatii Caesaris consan-  
guineus Armeniam nationesque circumsocias."

This passage defines the partition of 335. The emendation *Dal-*  
*matius* may be considered certain; it is absolutely necessary, and  
is almost universally accepted. I say *almost*, for H. Richter (see  
below) apparently retains *Dalmatiam*. *Dalmatius* is proved—(1) by

<sup>1</sup> In the Second Book of Philostorgios' *Hist. Ecc.* (ap. Photium), an authority some-  
what earlier than Sozomen, the will is also mentioned, and the name of the Arian  
πρεσβύτερος, is given—Eusebios of Nikomedia: ἐγγὺς δὲ τοῦ τέλους γεγονότα καὶ  
αἰσθόμενον τῆς ἐπιβουλῆς [of his brothers] διαθήκας τε γράφειν καὶ τιμωρίαν  
ἀπαιτούσας τοὺς ἀνελόντας καὶ ταύτην εἰσπράξασθαι τὸν προκαταλαβόντα τῶν  
παίδων κελύεσσαι δέει τοῦ μὴ τι κἀκείνους ὑπ' αὐτῶν ὁμοιον ὑποστήναι· δοῦναι δὲ  
τὰς διαθήκας Εὐσεβίῳ τῷ Νικομηδίᾳ.

the mention of Hannibalian ; (2) by the *Historia Miscella* : see No. 9 below.

(7). Anonymus Valesius, 35. "Dalmatium filium fratris sui Dalmatii Caesarem fecit, ejus fratrem Annibalianum data ei Constantiniana filia sua regem regum et Ponticarum gentium constituit, ita ut Gallias Constantinus minor regebat, Orientem Constantius Caesar, Illyricum et Italiam Constans, ripam Gothicam Dalmatius tuebatur, item Constantinus, cum bellum pararet in Persas, in suburbano Constantinopolitano villa publica juxta Nicomediam dispositam bene rem publicam filiis tradens obiit."

This is the arrangement existing immediately before Constantine's death. *Filiis tradens*—without reference to Dalmatius—reminds us of the sentence in Eusebius' *Vita Constantini*.

*Ripam Gothicam* is interpreted by H. Richter to mean part of the territories on the Danube, corresponding to the modern Servia and Bulgaria. In any case there is a distinct difference on this point between Victor and Anon. Val.

(8). *Historia ecclesiastica tripartita* (Cassiodori), III., 12. "Qui cum tres habuisset filios eos Caesares nuncupavit et singulos eorum per decennarios annos imperii sui principes esse constituit. Id est primum quidem filium sui nominis Constantinum Hesperiarum partium in Decennali suo fecit habere principatum : secundum vero avi nomine nuncupatum Constantium in vicennialibus suis Caesarem in oriente constituit ; minorem vero Constantem in suis tricennialibus ordinavit."

This history professes to rest on Sokrates, Sozomen, and Theodoret. The present passage is a direct translation from Sokrates ; and is incorrect as to the dates of the elevations of the three sons ; *ἐν τῇ πρώτῃ δεκάδι* being mistranslated *in decennali suo*.

(9). *Historia Miscella* (of Landulf), Muratori, S.R.I., i., p. 74. "Is successores filios reliquit atque unum Dalmatii fratris filium. Hi singuli has partes regendas habuerunt. Constantinus filius ejus primus in decennali suo ejus genitor fecit eum habere principatum super cuncta trans Alpes. Secundum Constantium in vicenniali suo in oriente constituit a freto Propontidis in Asiam atque orientem. Constantem vero juniorem in tricennialibus suis in Illyricum Italiamque et Africam ordinavit. Dalmatium in Thraciam Macedoniamque et Achaïam : Annibalianum Dalmatii Caesaris consanguineum in Armeniam nationesque circumsocias."

It is not hard to see that this account is compounded of Victor and Cassiodorus' *Hist. Ecc. Trip.*

(10). *Chronicon Alexandrinum*.

This late chronicle has two curious notices under Ol. 279 :

"Constantinus junior imperavit Constantinopoli annum i. Constans Romae annos xii . . ."

"Supra Dalmatium Caesarem fratris filium qui in Mesopotamiam et ipse tertium annum regnarat."

Tillemont gives credence to the statement that Constantine II. reigned at Constantinople; and Gotofredus accepts the notice that Dalmatius ruled in Mesopotamia (cf. below, *Chronicon Paschale*).

(11). Theophanes, p. 50 (ed. Bonn). γράφας δὲ διαθήκας τοῖς τρισὶν υἱοῖς αὐτοῦ τὴν βασιλείαν κατέλιπεν Κωνσταντίῳ, Κωνσταντίνῳ, Κώνσταντι . . . τὰς δὲ διαθήκας αὐτοῦ Ἀρειανῷ τινι πρεσβυτέρῳ ὑπὸ Κώνσταντίας τῆς ἀδελφῆς αὐτοῦ κακοφρόνως παρεισαχθέντι παρέβητο ἐντεταλμένος μηδενὶ ταύτας παρασχεῖν πλὴν Κωνσταντίῳ τῷ τῆς ἐφ᾽ αὐτῆς βασιλεῖ, ἐκέλευσε δὲ Ἀθανάσιον τῆς ἐξορίας ἐπανελθεῖν. Κωνσταντίος δὲ καταλαβὼν ἐκ τῆς ἐφ᾽ αὐτῆς τῶ τοῦ πατρὸς σῶμα ἐν τοῖς ἀποστόλοις κατέθετο, ὃ δὲ ἀνόσιος Ἀρειανὸς πρεσβύτερος ἐπιδούς Κωνσταντίῳ τὰς διαθήκας πολλῆς ἔτυχε παρρησίας ἐν τοῖς βασιλείοις. . . .

τοῦτῳ τῷ ἔτει Κωνσταντίνου τοῦ μεγάλου καὶ ἁγίου ἀναπανσαμένου οἱ τρεῖς υἱοὶ ἐκράτησαν τῶν Ῥωμαίων· τῆς μὲν ἐφ᾽ αὐτῆς Κωνσταντίος· τῶν δὲ Γαλλίων Κώνστας, καὶ Κωνσταντίνος τῆς Ἰταλίας.

In their accounts of the will, Theophanes and Sozomen coincide; Philostorgios diverges slightly from both. Probably Theophanes had not only Sozomen before him, but also the sources of Sozomen's account. It is curious that he interchanges the realms of Constans and Constantine.

(12). *Chronicon Paschale*, 532. καὶ κατέλιπε Καῖσαρς τοὺς τρεῖς υἱοὺς αὐτοῦ, Κωνσταντίνον Καῖσαρα βασιλεύοντα τῶν κατὰ Γαλλίαν μερῶν ἄγοντα τῆς βασιλείας ἔτος εἰκοστὸν καὶ Κωνσταντίον τὸν μετ' αὐτὸν Καῖσαρα ἐν τοῖς κατὰ τὴν ἀνατολὴν μέρεσιν ἔτος ἄγοντα τῆς βασιλείας ια' καὶ Κώνσταντα μετ' αὐτὸν Καῖσαρα ἐν τοῖς κατὰ τὴν Ἰταλίαν μέρεσι διάγοντα τῆς βασιλείας ἔτος ἄγοντα τρίτον καὶ Δαλμάτιον Καῖσαρα υἱὸν τοῦ ἀδελφοῦ αὐτοῦ ἐν τῇ Μεσοποταμίᾳ ἔτος ἄγοντα καὶ αὐτὸν τρίτον.

This notice gives us precise dates for the investment of the Caesars with governments. Constantine had been elevated in 317, so that he was just twenty years a Caesar in 337. Constantius became a Caesar in 323; but 337-323 = 14. Is ια' a mistake, or should we read ιδ'? Moreover, Constans became a Caesar in 333, two years before Dalmatius; why then ἔτος τρίτον?

When we look at the words more closely, we shall be disposed not to assume too readily that these numbers are erroneous. The writer does not say that twenty years, eleven years, and three years, have elapsed since Constantine, Constantius, and Constans, respectively, received the title of *Cæsar*. He says that at the death of Constantine I., Constantine II. was in the twentieth year of his government (τῆς βασιλείας), Constantius in the eleventh, and Constans in the third. From this we are entitled to infer that Constantine was made nominally governor—of Italy perhaps—in the latter half of 317, or the beginning of 318; that Constantius received a government (Gaul?), as we have already seen, in 327; that Constans was appointed ruler of Italy in the early part of 335.

It is very worthy of remark that Dalmatius' government is placed

in Mesopotamia,<sup>1</sup> as in the *Chronicon Alexandrinum*, of which it is the source.

(13). *Constantinos Porphyrogennētos, de Thematibus*, II. 9 (ed. Bonn, p. 57). οὕτω γὰρ ἐμέρισεν ὁ μέγας βασιλεὺς Κωνσταντῖνος τοῖς τρισὶν νείεσιν αὐτοῦ· τῷ μὲν πρώτῳ νῆψ τὰς ἀνω Γαλλίας καὶ τὰ ἐπέκεινα Ἀλπεῖων ἕως τοῦ ἑσπερίου Ὠκεανοῦ καὶ ἐς αὐτὴν πόλιν τὴν Κάνταβριν, τῷ δὲ Κώνσταντι τῷ υἱοτάτῳ νῆψ τὴν Ῥώμην καὶ τὰς κάτω Γαλλίας· τὴν τε νῆσον Σαρδὺ καὶ αὐτὴν Σικελίαν καὶ τὴν ἀντίπερα Λιβύην Καρχηδόνα τε τὴν τῶν Ἀφρων μητρόπολιν καὶ ἕως Κυρήνης αὐτῆς, τῷ δὲ Κωνσταντίῳ τὰ ἀπὸ τοῦ Δυρραχίου καὶ αὐτὸ τὸ Ἰλλυρικὸν τὴν Ἑλλάδα τε καὶ τὰς ἐπέκεινα νήσους τὰς τε Κυκλάδας καὶ τὰς καλουμένας Σποράδας καὶ ἕως Ἑλλησπόντου τὴν τε καλουμένην μικρὰν Ἀσίαν ἐμφοτέρας τε καὶ Συρίας καὶ Παλαιστίνην καὶ τὴν Κιλικίαν καὶ αὐτὴν Αἴγυπτον καὶ οὕτως μὲν ὁ παλαιὸς τε καὶ ὁ πρῶτος μερισμὸς τῆς βασιλείας Ῥωμαίων.

It is plain that the Emperor has not borrowed this detailed description from earlier writers, but has filled in some general description, in order to display his geographical learning. The chief points to be noted are—(1) he attributes this tripartition to Constantine; (2) he assigns Illyricum and Thrace to Constantius (instead of Constans), thus making his dominion co-extensive with what was afterwards the Eastern Empire. I presume that the author was led into this mistake by some vague notice, like that in *Chronicon Pasch.*, which stated that Constans reigned ἐν τοῖς κατὰ τὴν Ἰταλίαν μέρεσι, and did not mention Illyricum; whence the Emperor assumed wrongly that Illyricum fell to the share of Constantius.

(14). *Kedrēnos*, vol. I., p. 250 (ed. Bonn). διορισάμενος Κωνσταντῖον μὲν ἔχειν τὰ Θράκης καὶ ἐφ' ἑσῶς μέρη Κωνσταντῖνον δὲ τὰ πρὸς Ὠκεανὸν ἑσπερία Κώνσταντα δὲ Κρήτην Ἀφρικὴν καὶ τὸ Ἰλλυρικόν.

This notice differs from others in assigning implicitly Italy to Constantine. It agrees with Theophanes, Constantine Porph., and the *Paschal Chronicle*, in attributing the tripartition to Constantine I.

(15). *Zōnaras*, XIII., 5. ἡ δὲ τῶν Ῥωμαίων ἡγεμονία εἰς τοὺς τρεῖς ἐκείνου παῖδας μεμέριστο ξύμπασα ὥς μὲν τινες συνεγράψαντο παρὰ τοῦ πατρὸς σφίσι διανεμηθεῖσα, ὥς δ' ἕτεροι καθ' ἑαυτοὺς ταύτην αὐτῶν διελομένων μετὰ τὴν ἀποβίωσιν τοῦ πατρὸς. οὕτω δ' ἱστορηταὶ προβῆναι παρὰ σφίσιν ἡ διανέμησις· τῷ μὲν Κώνσταντι προσκληρωθῆναι τὴν Ἰταλίαν καὶ τὴν Ῥώμην αὐτὴν τὴν Ἀφρικὴν τε καὶ Σικελίαν καὶ τὰς λοιπὰς τῶν νήσων· ἀλλὰ μέντοι καὶ τὸ Ἰλλυρικὸν καὶ τὴν Μακεδονίαν καὶ σὺν τῇ Ἀχαΐᾳ τὴν Πελοπόννησον· τῷ δὲ Κωνσταντίνῳ τὰς Κοιτίας Ἀλπεῖς σὺν ταῖς Γαλλίαις προσνεμηθῆναι . . . καὶ τὸ Πυρρηναῖον κλίμα

<sup>1</sup> It seems not impossible that Dalmatius may have held a post in Mesopotamia, before he became Caesar, somewhat similar to that which Annibalianus held in Pontus and Armenia. It once occurred to me that *Mesopotamiam*, of the *Chron. Al.*, and *ripam Gothicam*, of Anon. Val., might be referred to a common source by assuming that *Μοισίαν παραποταμίαν* (*Moesia riparis*, cf. *Dacia riparis*) had been corrupted to *Μεσσοποταμίαν*.

<sup>2</sup> That is, Gallia Cisalpina.

μέχρι τῶν Μαύρων τῶν τῷ πορθμῷ διωρισμένων τοῦ Ωκεανοῦ. τῷ Κωνσταντίνῳ δὲ λάχος γενέσθαι ὅσα κατὰ τὴν ἑξῆς μοῖραν ἦσαν Ῥωμαῖοι ὑπῆκοα καὶ πρὸς τοῦτοις τὴν Θράκην σὺν τῇ πόλει τῇ πατρικῇ.

Zōnaras was a man of more critical ability than most of the Byzantine historians; and it is noteworthy that he observed the discrepancies in older writers, some of whom ascribed the tripartition to Constantine, others to the three brothers.

We now turn to examine the opinions of modern writers on this subject.

(1). Gibbon, who follows Tillemont, gives the division made by Constantine in his lifetime as follows:—The younger Constantine ruled in Gaul; Constantius in the East; Constans in Italy, Africa, and Western Illyricum. "He fixed Dalmatius on the Gothic frontier, to which he annexed the government of Thrace, Macedonia, and Greece."

After the massacre of the Flavian race this division was modified in the following manner:—Constantine obtained Constantinople; Thrace was added to the countries of the East which Constantius governed; "and Constans was acknowledged as the lawful sovereign of Italy, Africa, and the Western Illyricum." Gibbon does not say what became of Macedonia, Greece, Dacia, and Moesia.

(2). Heinrich Richter, in his long book, "Das weströmische Reich besonders unter den Kaisern Gratian, Valentinian II. and Maximus (375–388)," gives the *division of 335* as follows (see p. 100, and note 69, p. 671):—

Constantine held the Gallic prefecture.

Constans       ,, Italy, Africa, chief part of Illyricum.

Constantius   ,, Asia and Egypt.

Dalmatius, subordinate to Constans, governed part of Servia and Bulgaria.

Hannibalian, subordinate to Constantius, governed Pontus, Cappadocia, and Armenia.

On p. 103 (cf. n. 2, p. 671) the *division of 338 at Sirmium* is recorded:

Constantine obtained Britain, Spain, Gaul, part of Africa.

Constans       ,, Italy, Africa, Illyricum.

Constantius   ,, Thrace, Asia, Egypt.

In regard to this reconstruction the following points should be noted:—

(a). For the view that Dalmatius Caesar was not co-ordinate with the other three Caesars, but subordinate to Constans, Richter relies—(1) on the statement of Anon. Val. that he only possessed the "Gothic Bank"; (2) on the words of Zosimos, *συνῆρχον δὲ αὐτοῖς τρόπον τινα*, which implies a certain subordination; (3) on the passive rôle played

by Dalmatius after Constantine's death, viz. he took no part in Constantine's obsequies, which, had he ruled over Thrace, would have devolved upon him.

But—(1) the obscure expression of Anon. Val. is outweighed by the record of Victor, who assigns Thrace, Macedonia, and Greece to Dalmatius. (2) It is a distinct mistake to appeal to Zosimos, for Zosimos is speaking not of the arrangement made by Constantine in 335, but of the arrangement made by the brothers in 337 (see above); von Ranke has correctly explained *συνήρχον*. (3) It is hard to see how Dalmatius' absence from his uncle's obsequies proves anything. We may add that Richter does not take into account the important contemporary evidence of Eusebios' Panegyric.

(δ). Richter refers to Victor, epit. 41, for the second division. But this passage must refer to the earlier partition, as is proved by the mention of Annibalianus, even if we keep the old reading *Dalmatium*, which is disproved by the *Historia Miscella*.

(3). J. Burckhardt, "Die Zeit Constantins des Grossen," p. 337, gives the partition of 335 thus:—Constantine II. received Britain, Gaul, and Spain; Constans, Italy and Africa; Dalmatius, all the lands between the Adriatic and Euxine; Constantius, Asia, Syria, and Egypt; Hannibalian, Armenia, Pontus, and surrounding lands, "man weiss nicht ob unbeschränkt oder unter der oberherrschaft des Constantius II."

This view does justice to the record of Victor concerning Dalmatius' realm, but does not give sufficient weight to the Panegyric of Eusebios, which distinctly points to a quadri-partition among four Caesars, and implicitly excludes Annibalian, who was not a Caesar, from a co-ordinate position.

Burckhardt's discussion of Constantine's motives in making this division is worth reading. His object was to secure a Constantinian dynasty, and he must divide "schon um die Dynastie zu schonen." For if he made one of his sons sole heir, the probability was that he would murder his brothers and kinsfolk (as the Turkish Sultans used to do), and thus the chance of the continuation of his house would depend on one individual; whereas by a division among five there was a likelihood that heirs would survive, in spite of almost certain civil wars, from more than one of the five dynasts. This theory depends on the thoroughly justifiable assumption that Constantine was quite aware of the characters of his sons.

(4). In his essay on Zosimos, von Ranke comes to the following conclusions as certain: (1) no will of Constantine existed; (2) at his death his three sons and two relations shared in the government; (3) the army would have the sons only to reign over them.

In regard to the government assigned to Dalmatius, he prefers Victor to Anon. Val. He appreciates fully the importance of the passages of Eusebios, and points out that in both passages he records 'die momentane Lage' of affairs.

After this long enumeration of authorities, we may come perhaps to the following conclusions :—

(1). The arrangement of Constantine, in 335, divided the empire into four governments, each held by a Caesar :

|             |          |                           |
|-------------|----------|---------------------------|
| Constantine | governed | Gaul, Spain, and Britain. |
| Constans    | „        | Italy and Africa.         |
| Dalmatius   | „        | Illyricum and Thrace.     |
| Constantius | „        | the East.                 |

Annibalian was assigned a subordinate position in the realm of Constantius, with the title *rex regum*.

(2). No change in this arrangement was made by Constantine at or before his death.

(3). On Sept. 9, 337, the three sons of Constantine were proclaimed Augusti by the army, by which act Dalmatius was excluded from his share in the sovereignty. As a consequence of this it became necessary for the three brothers to divide the Balkan peninsula among themselves. Thrace would naturally be the share of Constantius; whilst it might suggest itself to the other brothers that Constans should take the rest of Illyricum, and give to Constantine a part of Italy or Africa equivalent to half of Illyricum. If there is any foundation for the statement of the Alexandrine chronicle (accepted by Tillemont and Gibbon), that the eldest brother reigned for a year at Constantinople, I would suggest that he may have been at Constantinople at the end of 337 and beginning of 338 to guard his interests in the division of Illyricum, and that on his return to Gaul (after the deaths of Dalmatius, &c.), in 338, he met Constans and Constantius at Sirmium, when they made a final arrangement.

(4). It is certain that the partition of 338 gave Constantius Thrace. The vagueness with which the earlier historians define the divisions of Constantine and Constans—Zosimos not even attempting to distinguish them, and Eusebios speaking with unprecise generality—seems to me to indicate that an arrangement was made but was not carried out. In the first place, there can be no doubt that this proposed arrangement did not affect Gaul and Italy, which formed the main body of their respective realms; the words of Eusebios (*V. C.*) make this certain. In the second place, Eusebios' words, *την δὲ τοῦτων μέσσην*, render it a natural presumption, confirmed by Zónaras, &c., that Constans obtained the whole of Illyricum (all the Balkan peninsula, except Thrace). In the third place, it is plain that Constantine would not have agreed to surrender his right to a share in the spoils of Dalmatius without receiving some equivalent from Constans. Constans must have undertaken to hand over to him part of Africa; and it was either because Constans did not fulfil this engagement, or



because Constantine demanded part of Italy as well, that Constantine made war on Constans.<sup>1</sup>

Zosimos, II., 41, says that they quarrelled about 'Carthaginian Libya' and Italy—*περὶ τῆς ὑπὸ Καρχηδόνα Λιβύης καὶ Ἰταλίας γενομένης ἀμφισβητήσεως*.

Victor, Epit. 41, *Interim ob Italiae Africaeque jus dissentire statum Constantinus et Constans*.

Zōnaras, XIII., 5. ὁ δὲ Κωνσταντῖνος τῷ Κωνσταντῷ ἐπαφύετο τὴν διανέμησιν τῶν χωρῶν αἰτιωμένος· καὶ ἡ παραχωρῆσαι μέρους αὐτῷ τῆς ἀρχῆς ἀπάντων ἢ διαδάσασθαι τὰς βασιλείας ἀμφω ζητῶν.

We must now return to the praetorian prefects. It is plain that the quadripartition of Constantine among four Caesars involved four courts, four bodies of civil servants (*palatini*), four praetorian prefects. And accordingly it might be said that in this way Constantine did institute four prefectures. But the point is, that the number of prefectures was a consequence of the number of the Caesars, was, we may say, accidental. As soon as the number of emperors changed, the number of prefects might change too. Zosimos did not grasp this point, because in his time the four praetorian prefects were an established institution.

We do not know whether Constans, before the death of his brother Constantine, placed Italy and Illyricum under one prefect or two. We saw above that after the death of Constans, when Constantius was sole Emperor, Italy and Illyricum had separate prefects. Their reunion under one prefect, Mamertinus, in 362, was the work of Julian. But Constantius' system of two prefects seems to have been merely the continuation of a system that necessarily prevailed during the ten years in which he shared the Empire with Constans. It is, I believe, generally supposed that after the death of Constantine II. Illyricum continued to remain under the sway of Constans. In that case the younger brother would have had far the larger share; and it is hardly likely that Constantius would have consented to such a displacement of equilibrium for any length of time. That Illyricum was ruled by Constantius before the death of his brother, is proved by a constitution of 349 (xii. 1, 39), addressed *ad Anatolium Pf. P.*, and dated from *Antioch*; as Philipppus was at that time Pf. P. of the East, Anatolius was Pf. P. of Illyricum. In 346 however a constitution is addressed to Anatolius from Caesena; so it would seem that the new arrangement was made between 346 and 349. Such an arrangement involved four praetorian prefects.

In the Codex Theod. Probus is mentioned as *praetorian prefect*

<sup>1</sup> It seems to me that we may discover a proof that Africa was actually placed under the jurisdiction of Constantine in Cod. Theod. xii. 1, 27 (*Habe Celsius karissime nobis*), a constitution which concerns the administration of the African province, but is dated from Trier, which seems to show that Celsinus was *P. P. Galliarum* (not as Haenel says, *Italiae*), and that Africa at that time was included in that prefecture.

of Italy in 368, 369, 370, 371, 372, 374. We learn from Ammianus (xxvii. 7, 1) that Mamertinus was still praetorian prefect in 367, but in that year was accused of peculation, and succeeded by Vulcatius Rufinus, who died in the following year, and was succeeded by Probus (ib., 11, 1). Ammian mentions him again as praetorian prefect in 373 and 374 (xxix. 6, 9, *praefectus praetorio agens tunc apud Sirmium*; xxx. 3, 1, *praefecti relatio Probi doctentis Illyrici clades*).

We find Probus mentioned in some inscriptions:

C. I. L., vol. v., 3844; Petronio Probo V. C. *totius admirationis viro proconsuli Africae praef. praetorio Illyrici praef. praet. Galliarum II. praef. praet. Italiae atque Africae III., &c.* (at Verona).

Henzen, 6418; procons. Africae praefecto praetorio per Illyricum Italiam et Africam (A.D. 378).

Marini, ined. Alb. p. 59; praefecto praetorio quater Italiae, Illyrici, Africae, Galliarum.

That no final separation was made between Italy and Illyricum until 395, when the empire was divided, is proved by the fact that we find Polemius *praetorian prefect of Italy and Illyricum* in 390, similarly Tatianus in 391-2; Apodemius in 392-3: see Cod. Theod.

I have attempted to show that no definite division of the empire into four prefectures, such as has been always attributed to Constantine, was ever designedly made, and that such a division did not unalterably exist until after 395. The four divisions of the *Notitia Dignitatum* were not finally stereotyped by Constantine, although Constantine contributed to fix them; they are natural geographical divisions, and their origin must be traced to Diocletian. The institution of four praetorian prefects was never determined by ordinance, it followed, so to speak, as an accidental consequence of other events. We are entitled to say that the precedent of four prefectures originated with Constantine, but we are not entitled to attribute it to him as an artificial enactment—like the division *e. g.* into dioceses. The localisation of the prefects and the increase of their number were consequences naturally entailed by the arrangement of Diocletian and the curious series of wars and political complications which followed his abdication. The increase in number and the localisation came to pass in the natural course of events, and Constantine made no enactment either to stereotype or to change these results. He simply took advantage of the new state of things, and administered in the spirit of the time, whereby of course he indirectly contributed to render familiar the already existent idea of three or four prefectures. His institution of four Caesars involved four praetorian prefects. But this precedent was so far from becoming a statute or definite enactment, that from the time of his death to the bipartition of the Empire, in 395, there were sometimes three prefectures and sometimes four. It is quite possible that, if events had not brought about the separation of the Western from the Eastern Empire, three prefectures might have finally become by usage a fixed institution.

It is not hard to conceive how Zosimos may have been misled into the statement upon which the historical error, which I have tried to expose, rests. In the middle of the fifth century—assuming the earliest date at which Zosimos can be placed—the system of four prefectures was a definitely established fact of the administration. It was in the time of Constantine that four prefects first held office simultaneously under the same Augustus. It was thoroughly in the spirit of Zosimos, or any ancient historian, to attribute an institution, which attained its final form by a series of gradual changes, and was naturally established by a succession of historical events, to an artificial enactment.

We must not forget, moreover, that Zosimos attributes a definite design to Constantine in the enactment which he ascribes to him—the design, namely, of diminishing the power and dignity of the prefects. A constitution of Constantine remains which shows that the tendency of Constantine was to increase, not to diminish, their power. In 331, a law was addressed *ad universos provinciales*, by which it was enacted that there was no appeal to the Emperor from the judicial sentence of the praetorian prefect—a *praefectis autem praetorio provocari non sinimus* (Cod. Theod. xi., 30, 16; Cod. Just. vii., 62, 19).<sup>1</sup> As an indication of the great power which the praetorian prefect possessed, and his exalted position as head of the civil, financial, and judicial administration of a large portion of the empire, it is interesting to mention that Eusebios, in an exposition of the nature of the Godhead (in his 'Panegyrikos'), illustrates the relation of God the Son to God the Father by the relation of the praetorian prefect (*ὑπαρχος*) to the Emperor.

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<sup>1</sup> This, however, does not imply that appeals from the sentences of officials of inferior rank (*comites proconsules*, &c.) must necessarily be made to a praetorian prefect; on the contrary, such appeals might be addressed to the Emperor.

PRÆTORIAN PREFECTS MENTIONED IN CODEX THEODOSIANUS, FROM  
315 A.D. TO 395 A.D.

| A. D.            | NAME.                   | DATE OF CONSTITUTIONS.   |
|------------------|-------------------------|--|
| 315              | Constantius.            | { xi. Kal. Febr. (Caralis)?<br>iv. Kal. Maii.  |
| „                | Evagrius.               | { xiv. Kal. Oct. (Naissi).<br>xv. Kal. Nov. (Murgillo).                                    |
| 317              | Leontius.               | vii. Kal. Aug.   |
| 318              | Florianus. <sup>1</sup> | iv. Id. April.   |
| 319 <sup>2</sup> | Rufinus.                | { iv. Id. Maii (Sirmio).<br>Kal. Dec. (Sirmio).  |
| 320              | Bassus.                 | xv. Kal. Aug.  |
| 321              | Bassus.                 | x. Kal. Jul. (Aquileia).   |
| 324              | Constantius.            | xvii. Kal. Jun.  |
| 325              | Constantius.            | { iv. Kal. Sept. (Antiochiae).<br>Non. Oct.  |
| 326              | Evagrius.               | { iii. Non. Febr. (Heracleae).<br>vii. Kal. Maii (Nicomediae).<br>xvi. Kal. Jun.           |
| „                | Acindynus. <sup>3</sup> | xv. Kal. Mart.   |
| „                | Ablabius.               | { Kal. Jun.  |
| „                | Secundus.               | { xiv. Kal. Oct.   |
| „                | Secundus.               | { iii. Kal. Jul.   |
| 327              | Maximus.                | { xii. Kal. Febr.  |
| „                | Constantius.            | { v. Kal. Oct. (Treviris).   |
| „                | Constantius.            | { iii. Id. Jun. (Constantinople).  |
| 328              | Aemilianus.             | { vii. Id. Maii (Romae).   |
| „                | Secundus.               | { Kal. Dec.  |
| „                | Maximus.                | { iv. Kal. Jun. (Treviris).  |
| 329              | Bassus.                 | { viii. Id. Mart. (Constantinopoli).   |
| „                | Secundus. <sup>4</sup>  | { vii. Kal. Aug. (Naissi); P. P. Non<br>Oct. (Romae).<br>xiv. Kal. Maii (Constantinopoli). |

<sup>1</sup> Florianus was *Pf. P. orientis* (cf. vii. 20, 1).

<sup>2</sup> In the year 319 a constitution (iii. 19, 1) is addressed *ad Bassum Pf. P.*, but another constitution is addressed (in the same month, October) *ad Bassum Pf. U.* I follow Haenel in supposing that *Pf. P.* is an error for *Pf. U.* Similarly, in constitutions of 321 and 322 we find the inscription *ad Maximum Pf. P.*, as well as *ad Maximum Pf. U.*, e. g. i. 4, 1. Haenel is doubtless right in reading *Pf. U.*—‘Ego puto *Pf. U.* (urbis) legendum esse quod etiam codd. in c. un. Th. de Sent. pass. (ix. 43) habent et confirmatur a vetere auctore de Praefect urbis ap. Cuspinianum. Saepissime enim a librariis commutantur sigla utriusque dignitatis et Praefecti Praetorio et Praefecti Urbis, cujus erroris centena sunt exempla.’

<sup>3</sup> The prefecture of Acindynus is perhaps doubtful; at least Gotofredus attributes viii. 6, 3 to Constantius in the year 339.

<sup>4</sup> *Secundo Pf. P. orientis* (i. 16, 6), from which inscription we may conclude that he was P. P. of the East in 328 also.

| A. D.            | NAME.                             | DATE OF CONSTITUTIONS.  |
|------------------|-----------------------------------|---|
| 330              | Bassus. <sup>1</sup>              | xii. Kal. Jul.  |
| „                | Ablabius. <sup>2</sup>            | iii. Kal. Dec. (Constantinopoli).   |
| 331              | Bassus.                           | { Prid. Kal. Mart.<br>xiii. Kal. Nov.   |
| „                | Ablabius.                         | { xv. Kal. Maii (Constantinopoli).<br>iii. Non. Maii.                         |
| „                | Evagrius.                         | { Prid. Non. Aug.<br>Prid. Id. Aug.   |
| 332              | Leontius.                         | iii. Id. April.   |
| 333              | Maximus.                          | iii. Non. Maii.   |
| „                | Ablabius.                         | Id. Oct.  |
| 334              | Pacatianus.                       | { viii. Id. Mart. (Romae).<br>iii. Non. Jul. (Singiduno).                     |
| 335              | Pacatianus.                       | xv. Kal. Maii (Constantinopoli).  |
| „                | Felix. <sup>3</sup>               | { Prid. Non. Aug. (Viminacio).<br>Dat. xii. Kal. Nov. (Constantino-<br>poli). |
| 336              | Felix.                            | P. P. viii. Id. Maii (Karthagine).  |
| „                | Gregorius.                        | { Lecta xii. Kal. Aug. (Karthagine).<br>vii. Id. Oct.                         |
| „                | Evagrius.                         | xi. Kal. Sept. (Constantinopoli).   |
| 337              | (?) Gregorius.                    | Prid. Non. Febr. (Constantinopoli).   |
| 338              | Celsinus.                         | Prid. Id. Jun. (Viminaci).  |
| „                | Domitius Leontius.                | xv. Kal. Nov.   |
| „                | Acindynus.                        | vi. Kal. Jan. (Antiochia).  |
| 339              | Celsinus. <sup>4</sup>            | vi. Id. Jan. (Treviris).  |
| „                | Mecilius Hilarianus. <sup>5</sup> | { viii. . . . April.<br>iv. Kal. Jun.   |
| 340              | Acindynus.                        | Dat. Non. Apr.  |
| „                | Philippus. <sup>6</sup>           | v. Id. Jun.   |
| „                | Marcellinus.                      | iv. Kal. Jul.   |
| 341 <sup>7</sup> | Catulinus.                        | viii. Kal. Jul. (Lauriaco).   |

<sup>1</sup> *Ad Bassum Pf. U.* (ii. 26, 2); corrected to *Pf. P.* with sufficient certainty.

<sup>2</sup> Ablabius was *P. P. orientis*, and evidently succeeded Secundus.

<sup>3</sup> iii. 30, 6 is addressed *Felici* (333 A.D.); and xiii. 4, 1, and xiii. 5, 6, are addressed *ad Felicem* (334 A.D.). Hence it is possible that Felix may have been *P. P.* from 333 to 336. He must have been *P. P. Italiae et Africae*.

<sup>4</sup> xii. 1, 27 is inscribed *Habe Celsine karissimis nobis*. It seems certain that Celsinus was still *P. P.*, and this constitution shows that he was *P. P. Galliarum*, as it is dated from Trier. Gregorius was *P. P. Italiae* (cf. Haenel on iv. 6, 3). Thus in this prefecture Felix was succeeded by Gregorius; Gregorius perhaps by Mecilius.

<sup>5</sup> Mecilius seems to have been Prefect of Italy: cf. vi. 4, 4.

<sup>6</sup> Philippus is doubtful in 340: see Got. & Haenel ad xi. 30, 20.

<sup>7</sup> xii. 1, 32, *ad Hilarianum* (341) suggests the possibility that Hilarianus was still *P. P.* in this year. Catulinus was Prefect of Italy. We do not know whether he was succeeded immediately by Placidus, or others intervened.

# BURY—*On the Roman Empire in Fourth Century, A. D. 509*

| A. D. | NAME.                    | DATE OF CONSTITUTIONS.   |
|-------|--------------------------|--|
| 342   | Domitius Leontius.       | { v. Id. Maii (Antiochiae).<br>iii. Kal. Aug.<br>v. Id. Oct.   |
| 343   | Leontius.                | { xii. Kal. Mart. (Antiochiae).<br>v. Kal. Jul. (Hierapoli).   |
| "     | Titianus. <sup>1</sup>   | Prid. Kal. Jul. (Treviris).  |
| 344   | Placidus.                | v. Kal. Jun.   |
| "     | Leontius.                | Prid. Non. Jul.  |
| 346   | Anatolius. <sup>2</sup>  | x. Kal. Jun. (Caesenas).   |
| "     | Philippus.               | v. Kal. Aug.   |
| "     | Taurus.                  | Kal. Dec.  |
| 349   | Limenius.                | { Prid. Id. Febr.<br>v. Kal. April.  |
| "     | Eustathius.              | viii. Id. Mart.  |
| "     | Anatolius.               | Kal. April (Antiochiae).   |
| "     | Titianus.                | iii. Kal. Jun.   |
| "     | Philippus.               | xii. Kal. Oct.   |
| 353   | Taurus.                  | xii. Kal. Aug. (Ravennae).   |
| 354   | Musonianus. <sup>3</sup> | viii. Kal. Aug.<br>viii. Id. Apr.  |
| 355   | Taurus.                  | { xvi. Kal. Aug. (Mediolani).<br>xii. Kal. Aug. (Mediolani).<br>viii. Kal. Aug. (Mediolani).<br>Kal. Aug. (Mediolano).<br>iv. Non. Sept. (Dinummae). |
| "     | Lollianus.               | { xi. Kal. Aug. (Mediolani).<br>viii. Kal. Aug. (Messadensi).  |
| "     | Volusianus.              | iii. Kal. Aug.   |
| 356   | Musonianus.              | xviii. Kal. Febr. (Mediolani).   |
| "     | Rufinus.                 | viii. Id. Mart. (Mediolano).   |
| "     | Taurus.                  | { iii. Non. Jul. (Mediolano).<br>Non. Dec.   |
| 357   | Taurus.                  | (7 constitutions).   |
| "     | Talassius.               | v. Non. Jul. (Mediolano).  |
| 358   | Taurus.                  | (5 constitutions).   |

<sup>1</sup> *Ad Titianum*. Pf. P. must be supplied (xii. 1, 36); cf. the Chronicle of Hieronymus, under the 8th year of Constans (344): 'Titianus, vir eloquens praefecturam praetorianam apud Gallias administrat.' He was succeeded by Vulcatius Rufinus in 349, whom Florentius followed in 357. Leontius was P. P. of the East; he apparently succeeded Acindynus, and was succeeded by Philippus. He had held the same office before in 338.

<sup>2</sup> Prefect of Illyricum, apparently from 346 to 349. Perhaps Placidus (see 344) was Prefect of Italy and Illyricum (see above, p. 504).

<sup>3</sup> Musonianus succeeded Domitianus as P. P. *orientis* (Amm. Marc. xv. 13, 1). Domitian had succeeded Thalassius, who was P. P. in 353 (*ib.* xiv. 1, 10; 7, 9), having succeeded Philippus in 351.

| A. D.            | NAME.                      | DATE OF CONSTITUTIONS.                   |
|------------------|----------------------------|--|
| 358              | Musonianus.                | { vii. Id. Jun. (Haerbillo).             |
| „                | (?) Elpidius. <sup>1</sup> | { iii. Id. Jun. (Mediolani).             |
| 359              | Taurus.                    | iv. Kal. Jan. (Doridæ).                  |
| „                | Elpidius.                  | (2 constitutions).                       |
| „                | Hermogenes.                | Prid. Id. Mart. (Constantinopoli).       |
|                  |                            | v. Kal. Jun. (Sirmio).                   |
| 360              | Elpidius.                  | { Prid. Non. Febr. (Constantinopoli).    |
|                  |                            | { xvi. Kal. Jun. (Hierapoli).            |
| „                | Taurus.                    | { xvi. Kal. Dec.                         |
| 361              | Taurus.                    | (2 constitutions).                       |
|                  |                            | iv. Kal. Sept.                           |
| 362              | Secundus (Sallustius).     | { (13 constitutions, of which earliest   |
|                  |                            | { is viii. Id. Jan.; and latest viii.    |
|                  |                            | { Id. Dec. (in Foro Trajani)).           |
| „                | Mamertinus.                | { viii. Kal. Mart. (Syracusia).          |
|                  |                            | { viii. Id. Jun.                         |
| „                | Germanianus.               | { xii. Kal. Jul.                         |
|                  |                            | { v. Id. Sept.                           |
| 363              | Secundus.                  | { xv. Kal. Jan.                          |
|                  |                            | { Prid. Non. Feb.                        |
|                  |                            | { xiv. Kal. Mart. (Antiochia).           |
|                  |                            | { Kal. Mart. (Beryto).                   |
| „                | Mamertinus.                | { iv. Kal. Mart.                         |
|                  |                            | { x. Kal. April.                         |
|                  |                            | { ix. Kal. Maii (Salonæ).                |
|                  |                            | { vii. Kal. Dec. (Antiochia).            |
| 364              | Mamertinus.                | { v. Kal. Dec. (Viminacio).              |
|                  |                            | { (16 constitutions).                    |
|                  |                            | { xv. Kal. Maii (Constantinopoli).       |
| „                | Secundus (Sallustius).     | { v. Id. Sept.                           |
|                  |                            | { vi. Id. Sept.                          |
|                  |                            | { v. Kal. Oct. (Aedesa).                 |
| 365 <sup>2</sup> | Mamertinus.                | { (12 constitutions, of which the latest |
|                  |                            | { is dated Prid. Kal. Nov. (Romæ)).      |

<sup>1</sup> Elpidius succeeded Hermogenes in the East (Amm. Marc. xxi. 6, 9) in 360; therefore this constitution seems to be mis-dated (vii. 4, 5), and also either that addressed to Hermogenes, or that addressed to Elpidius in 359.

<sup>2</sup> Constitutions addressed *ad Rufinum Pf. P.* are attributed to this year (viii. 6, 1; ix. 30, 3; xii. 1, 66; vii. 7, 2). They imply that Rufinus was *Pf. P. Italiae*; but this office was held by Mamertinus (cf. Amm. Marc. xxvii. 7). Godefroy refers these constitutions to 368; Tillemont to 370. Haenel says: 'Consultius igitur est in re lubrica abstinere ab emendandi ardore,' on account of the number of laws which agree in combining the *praefectura* of Rufinus with the consuls of 365.

There are also three constitutions (x. 16, 1; vii. 6, 2; x. 20, 4) addressed *ad Auxonium Pf. P.*; as Auxonius was *Pf. P. orientis* in 368, and not till then, we must follow Godefroy in assigning them to that year (cf. Zosimos, iv. 10). Two

# BURY—On the Roman Empire in Fourth Century, A. D. 511

| A. D.            | NAME.                    | DATE OF CONSTITUTIONS.   |
|------------------|--------------------------|--|
| 365              | Secundus.                | { xiv. Kal. Apr. (Constantinopoli).<br>iv. Non. Jul. (Caesarea).<br>iii. Kal. Aug. (Constantinopoli).<br>Kal. Dec. (Chalcedone). |
| 366 <sup>1</sup> | Secundus.                | Prid. Non. April (Treviris).   |
| "                | Germanianus.             | vii. Id. April (Remis).  |
| "                | Rufinus.                 | iv. Id. Oct.   |
| 367              | Rufinus.                 | xiv. Kal. Jun. (Remis).  |
| "                | Florentius. <sup>2</sup> | iii. Non. Jun. (Remis).  |
| 368              | Probus. <sup>3</sup>     | iv. Id. Mart. (Treviris).  |
| "                | Viventius. <sup>4</sup>  | ix. Kal. Oct.  |
| 369              | Probus.                  | (9 constitutions).   |
| "                | Viventius.               | { x. Kal. Mart. (Treviris).<br>Kal. April (Treviris).<br>xvi. Kal. Jun. (Complati).<br>iii. Non. Nov. (Treviris).                |
| "                | Auxonius.                | { v. Non. Maii (Martianopoli).<br>iv. Kal. Jan. (Constantinopoli).<br>Indictione xii.  |
| 370 <sup>5</sup> | Probus.                  | xiv. Kal. April (Treviris).  |
| "                | Viventius.               | iii. Kal. April (Treviris).  |

of these rescripts are dated *Martianopoli*, and Valens was not at *Marcianopolis* in 365, so that we are justified in rejecting the date (cf. Haenel ad x. 20, 4).

Four constitutions addressed ad *Modestum P. P.* (xi. 36, 17; xii. 1, 63; xi. 30, 35; ix. 16, 8) are dated 365 (*Cynico, Beryto, &c.*); but *Secundus* was *P. P. orientis* in 365 (*Amm. Marc. xxvi. 5, 5*), having succeeded *Elpidius* in 361.

*Germanianus* held the *Gallio* prefecture from 362–366. *Florentius* had been succeeded by *Nebrius* in 360, and he by *Sallustius* (361–362). It is possible that a certain *Honoratus*, mentioned in *Jerome's Chronicle* (360), may have intervened between *Florentius* and *Nebrius*.

<sup>1</sup> xi. 1, 15, *ad Probum Pf. P.* (366) is erroneous (see *Got.* and *Haenel ad locum*); and similarly xi. 1, 14, *ad Modestum Pf. P.* In 366 *Germanianus* was *P. P. of Gaul*; *Rufinus* succeeded *Mamertinus* in *Italy* (*Amm. Marc., xxvii. 7, 2*); in the East, *Secundus* had been succeeded by *Nebrius* in 365 (*ib. xxvi. 7, 4*, and *Zos. iv. 6*), and *Nebrius* by *Araxius* (*Amm. Marc. xxvi. 7, 6*). In 365 *Secundus* had resigned, but he became prefect again, and, as old age began to tell on him, was succeeded by *Auxonius* (*Zos. iv. 10*). If the dates in *Cod. Theod.* are correct the prefectures of *Nebrius* and *Araxius* must have been very short, between September and December 1, 365.

<sup>2</sup> xiii. 10, 5, *ad Florentium, Pf. P. Galliarum* (cf. *Amm. Marc., xxvii. 7, 7*).

<sup>3</sup> *Probus* succeeded *Rufinus* as *P. P. of Italy and Illyricum* (368–374). Seven constitutions to *Probus*, which are marked in the *Codex 365*, should probably be ascribed to this year.

<sup>4</sup> x. 17, 1, *ad Viventium Pf. P. Galliarum* (see *Amm. Marc., xxx. 5, 11*). Three constitutions are addressed to *Viventius, Pf. P.* in 365, but in that year *Germanianus* was *P. P. of Gaul*, whence *Got.* rejects the date. *Viventius* succeeded *Florentius*, the successor of *Germanianus*.

<sup>5</sup> For xi. 24, 2, *ad Auxonium Pf. P.*, see *Haenel's* note.



| A. D. | NAME.                   | DATE OF CONSTITUTIONS.            |
|-------|-------------------------|-----------------------------------|
| 370   | Modestus. <sup>1</sup>  | { xiv. Kal. Oct. (Hierapoli).     |
| 371   | Modestus.               | { xvi. Kal. Nov. (Hierapoli).     |
|       |                         | { (4 constitutions).              |
|       | Viventius.              | { iii. Id. Febr. (Treviris).      |
|       |                         | { iv. Kal. Jul. (Treviris).       |
|       | Probus.                 | { iii. Kal. Jul. (Contionaci).    |
| 372   | Probus.                 | { (3 constitutions).              |
|       | Modestus.               | { (3 constitutions).              |
| 373   | Probus.                 | { vi. Id. April (Sirmio).         |
|       | Modestus.               | { vi. Id. Dec. (Constantinopoli). |
| 374   | Probus.                 | { vii. Kal. Febr. (Sirmio).       |
|       |                         | { vii. Id. Febr. (Romae).         |
|       |                         | { iii. Non. Dec. (Treviris).      |
|       | Maximinus. <sup>2</sup> | { xviii. Kal. Dec.                |
| 375   | Modestus.               | { iv. Non. Jun. (Antiochiae).     |
|       |                         | { iii. Non. Dec. (Antiochiae).    |
| 376   | Maximinus.              | { Id. Mart.                       |
|       |                         | { xvi. Kal. Maii (Romae).         |
|       | Antonius. <sup>3</sup>  | { x. Kal. Jun.                    |
|       |                         | { xv. Kal. Oct. (Treviris).       |
| 377   | Antonius.               | { viii. Id. Jan.                  |
|       |                         | { v. Kal. Aug. (Mogontiaci).      |
|       | Hesperius. <sup>4</sup> | { xii. Kal. Feb.                  |
|       |                         | { iii. Kal. Mart. (Treviris).     |
|       | Modestus.               | { Prid. Non. April (Antiochiae).  |
|       |                         | { v. Id. Aug. (Hierapoli).        |
| 378   | Antonius. <sup>5</sup>  | { Prid. Id. Jan. (Treviris).      |
|       |                         | { Prid. Kal. Dec. (Treviris).     |
|       | Marianus.               | { vii. Id. Mart.                  |
|       | Ausonius.               | { xii. Kal. Maii (Treviris).      |
| 379   | Hesperius.              | { (5 constitutions).              |

<sup>1</sup> Modestus succeeded Auxonius. He is mentioned by Amm. Marc. (xxix. 1, 10; xxx. 4, 2).

<sup>2</sup> For Maximinus see Amm. Marc., xxix. 3, 1; xxx. 2, 11. In the codex his name is twice written Maximus. He was P. P. of Gaul (not, as in Gardthausen's index to Ammian, of Italy). Probus was still P. P. of Italy and Illyricum in 375, cf. Amm. Marc. xxx. 5.

<sup>3</sup> xiii. 3, 11, *Antonio P. P. Galliarum*. In xvi. 5, 4, *ad Hesperium P. P.*, we should probably read *procons.*; and in i. 6, 7, *P. U. (ad Rufinum)*.

<sup>4</sup> Hesperius, who had been proconsul of Africa in 370 (Amm. Marc., xxviii. 6, 28), and in 376 (Cod. Theod. xv. 7, 8) became P. P. of Italy, and probably of Illyricum. He seems to have continued in office until 380.

<sup>5</sup> Some would read Ausonius (the poet). Three courses are open—(1) read *Ausonius* in ix. 20, 1; ix. 40, 12; xi. 39, 7; (2) read *Antonius* in viii. 5, 35; (3) suppose that Ausonius succeeded Marianus as P. P. of Gaul, between March 9 and April 20, Marianus (see Haenel ad i. 5, 8) having succeeded Antonius, and that before the end of November Antonius was reappointed.

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| A. D.            | NAME.                       | DATE OF CONSTITUTIONS.   |
|------------------|-----------------------------|--|
| 379              | Siburius. <sup>1</sup>      | iii. Non. Dec. (Treviris).   |
| 380              | Neoterius.                  | { xviii. Kal. Febr. (Thessalonica).  |
|                  |                             | { vi. Id. Sept. (Sirmio).  |
|                  |                             | { (And 4 other constitutions between Jan. and Sept.)                         |
| ,,               | Probus.                     | { iv. Id. Mart. (Hadrumeto).   |
|                  | Hesperius.                  | { v. Kal. Jul. (Aquileia).   |
| ,,               | Eutropius. <sup>2</sup>     | { Prid. Id. Mart. (Aquileia).  |
|                  |                             | { xv. Kal. Jul. (Thessalonica).  |
|                  |                             | { iii. Kal. Jan. (Constantinopoli).  |
| ,,               | Syagrius.                   | { (And 3 constitutions at intermediate dates).                               |
|                  |                             | { xiv. Kal. Jul.   |
|                  |                             | { Id. Jul. (Romae).  |
| 381              | Eutropius.                  | { (9 constitutions, of which the latest is dated Non. Sept. (Hadrianopoli)). |
| ,,               | Neoterius.                  | xvii. Kal. Febr.   |
| ,,               | Syagrius.                   | { iii. Kal. Mart.  |
|                  |                             | { iii. Non. Jul. (Viminacio).  |
|                  |                             | { vii. Id. Oct.  |
| ,,               | Florus. <sup>3</sup>        | { iii. Kal. Aug. (Heracleae).  |
|                  |                             | { Id. Dec. (Constantinopoli).  |
|                  |                             | { xii. Kal. Jan. (Constantinopoli).  |
| 382 <sup>4</sup> | Florus.                     | (12 constitutions).  |
| ,,               | Syagrius.                   | { v. Id. April (P. P. Karthagine).   |
|                  |                             | { iii. Non. Jul. (Viminacio).  |
| ,,               | Hypatius.                   | { Id. April (P. P. Karthagine).  |
|                  |                             | { v. Id. Dec.  |
| ,,               | (?) Flavianus. <sup>5</sup> | xviii. Kal. Jan. (Patavi).   |
| 383              | Hypatius.                   | { xv. Kal. Sept. (Verona).   |
|                  |                             | { (6 constitutions; latest v. Kal. Jun. (Patavi)).                           |
| ,,               | Probus.                     | xiv. Kal. Febr. (Mediolano).   |

<sup>1</sup> Siburius succeeded Antonius (or Ansonius) in Gaul.

<sup>2</sup> As both Neoterius and Eutropius were prefects of Theodosius, and Neoterius was prefect of the East (cf. Haenel on i. 6, 10), Eutropius must have been prefect of Illyricum. Syagrius succeeded Hesperius in Italy, and Probus was P. P. of Gaul.

<sup>3</sup> It is evident that Florus succeeded Neoterius in the East.

<sup>4</sup> *Clearcho Pf. P.*, in three constitutions of this year, is due to a mistake for *Pf. U.* (iv. 17, 2; iv. 17, 3; xii. 1, 93).

<sup>5</sup> ix. 40, 13 (381), is addressed *Flaviano Pf. P. Illyrici et Italiae*; and in 383, vii. 18, 8, and ix. 29, 2, are addressed *ad Flavianum Pf. P.* But Hypatius was Pf. P. of Italy; therefore there must be some mistake. There is a further difficulty: the dates in the Codex make the prefectures of Syagrius and Hypatius overlap.

| A. D. | NAME.                   | DATE OF CONSTITUTIONS.   |
|-------|-------------------------|--|
| 383   | Florus.                 | { iv. Non. Febr. (Constantinopoli).<br>iii. Non. Mart. (Constantinopoli).  |
| "     | (?) Flavianus.          | { iii. Kal. Mart.<br>viii. Id. April,<br>xiii. Kal. Jun.<br>iv. Kal. Jun.  |
| "     | Postumanus.             | { xiv. Kal. Aug.<br>viii. Kal. Aug.<br>iii. Non. Sept.<br>vii. Id. Nov.<br>v. Non. Oct. } (Constantino-<br>poli).  |
| 384   | Cynegius. <sup>1</sup>  | { xv. Kal. Febr. (Constantinopoli)<br>(and 9 other constitutions).   |
| "     | Neoterius.              | Kal. Febr.   |
| "     | Atticus.                | iii. Id. Mart. (Mediolano).  |
| "     | Praetextatus.           | xii. Kal. Jun. (Mediolano).  |
| 385   | Cynegius.               | (9 constitutions).   |
| "     | Neoterius. <sup>2</sup> | (9 constitutions; latest iii. Id. Aug.).   |
| "     | Principius.             | { Kal. Jun. (?) (and 8 other constitu-<br>tions).  |
| 386   | Cynegius.               | (15 constitutions).  |
| "     | Eusignius.              | { x. Kal. Febr. (Mediolano).<br>xv. Kal. Mart. (Ticini).<br>Prid. Id. Jul. (Mediolano).<br>xiv. Kal. Dec. (Mediolano).<br>iii. Non. Dec. (Mediolano).<br>viii. Kal. Jan. |
| "     | Principius.             | { xii. Kal. Maii (Aquileiae).<br>iii. Non. Nov. (Aquileiae).   |
| 387   | Eusignius.              | { (5 constitutions; latest xiv. Kal.<br>Jun. (Mediolano).  |
| "     | Cynegius. <sup>3</sup>  | (4 constitutions).   |

<sup>1</sup> From xii. 1, 106, it appears that Cynegius was *Pf. P. orientis*: cf. viii. 4, 17, *Cynegio Pf. P. per orientem* (389, wrongly dated). Neoterius and Atticus (succeeded by Praetextatus) were prefects of the two western prefectures (Italy and Gaul), but we cannot determine which of which.

<sup>2</sup> Neoterius (probably same as Neoterius of viii. 5, 43; 384 A.D.) was P. P. of either Gaul or Italy, and was apparently succeeded by Principius. The date *Kal. Jun.* of ix. 40, 14, *ad Principium Pf. P.*, is erroneous (see Haemel *ad loc.*). In 386 and 387 Eusignius was *Pf. P.* of Italy or Gaul. From the date of ii. 8, 18; viii. 8, 3; and xi. 7, 13, *ad Principium (P. P. iii. Non. Nov. Aquileiae. Acc. viii. Kal. Dec. Romae)*, I conclude that Principius was prefect of Italy, and therefore, Eusignius of Gaul.

<sup>3</sup> In this year two constitutions are addressed to Cynegius, one of which, xii. 1, 108, is dated, *V. Id. Aug. Constantinopoli*; but Theodosius was not at Constantinople in 388, and Tatianus succeeded Cynegius before June 16. Three constitutions are addressed to Cynegius in 389, but Cynegius died in 388 (Zos. iv. 46).

BURY—*On the Roman Empire in Fourth Century, A. D.* 515

| A. D. | NAME.                       | DATE OF CONSTITUTIONS.  |
|-------|-----------------------------|---|
| 388   | Trifolius.                  | { xviii. Kal. Jul. (Stobis).<br>x. Kal. Oct. (Aquileia).<br>vi. Id. Oct. (Mediolano).   |
| „     | Tatianus.                   | { xvi. Kal. Jul. (Stobis).<br>xi. Kal. Jul. (Stobis).<br>xv. Kal. Nov.  |
| 389   | Constantianus. <sup>1</sup> | { xix. Kal. Febr. (Mediolano).<br>v. Kal. Mart. (Mediolani).<br>vi. Id. Nov. (Treviris).  |
| „     | Trifolius.                  | xiv. Kal. Febr. (Mediolano).  |
| „     | Tatianus.                   | (7 constitutions).  |
| 390   | Polemius. <sup>2</sup>      | { xvii. Kal. Febr. (Mediolano).<br>Prid. Non. April (Mediolano).  |
| „     | Tatianus.                   | (8 constitutions).  |
| 391   | Albinus. <sup>3</sup>       | vi. Kal. Mart. (Mediolano).   |
| „     | Tatianus.                   | (5 constitutions).  |
| „     | Flavianus. <sup>4</sup>     | { v. Id. Maii (Concordiae).<br>vi. Kal. Jun. (Vincentiae).  |
| 392   | Apodemius. <sup>5</sup>     | { xv. Kal. Mart. (Constantinopoli).<br>v. Kal. Aug. (Constantinopoli).<br>iv. Id. Sept. (Constantinopoli).                        |
| „     | Tatianus.                   | { (6 constitutions; latest Prid. Kal.<br>Jul. (Constantinopoli)).   |
| „     | Rufinus. <sup>6</sup>       | { vii. Kal. Sept.<br>iv. Id. Sept.<br>Prid. Non. Nov.<br>vi. Id. Nov.<br>x. Kal. Dec.<br>vii. Id. Sept. } (Constantino-<br>poli). |
| 393   | Rufinus.                    | (23 constitutions).   |
| „     | Apodemius.                  | v. Id. Jun. (Constantinopoli).  |
| 394   | Rufinus.                    | (9 constitutions).  |
| 395   | Rufinus.                    | { (6 constitutions; latest Prid. Non.<br>Dec.)  |

<sup>1</sup> Constantianus was *Pf. P. Galliarum*; therefore Trifolius was *Pf. P. Italias*.

<sup>2</sup> xv. 1, 26, *Polemio Pf. P. Illyrici et Italias*. Tatianus was *Pf. P. Orientis* (from 388 to 392); and yet two constitutions, x. 18, 3, and vi. 29, 7, are addressed *Neoterio Pf. P.*, and are dated *Constantinopoli*. All the constitutions addressed to Tatianus are dated from Mediolanum, or Verona.

<sup>3</sup> See xvi. 10, 10; Albinus may have been *Pf. P. Galliarum*.

<sup>4</sup> i. 1, 2, *Flaviano Pf. P. Illyrici et Italias*. Flavianus succeeded Polemius.

<sup>5</sup> xiii. 5, 21, *Apodemio Pf. P. Illyrici et Africae*; xii. 12, 12, *Apodemius Pf. P. per Illyricum*; xi. 30, 51 (393), *Apodemio Pf. P. Illyrici et Italias*.

<sup>6</sup> Rufinus succeeded Tatianus.

| A. D. | NAME.                   | DATE OF CONSTITUTION.  |
|-------|-------------------------|--|
| 395   | Theodorus. <sup>1</sup> | { xiii. Kal. Febr.<br>iv. Kal. Oct. (Mediolano).   |
| „     | Dexter.                 | { (7 constitutions); xv. Kal. April<br>(Mediolano) earliest; Kal. Nov.<br>(Brixiae) latest). |
| „     | Eusebius.               | { xv. Kal. Jul. (Mediolano).<br>xiv. Kal. Jan. (Romae).                                      |
| „     | Caesarius. <sup>2</sup> | { viii. Kal. Jul.<br>Prid. Kal. Dec. } (Constantinopoli).<br>iv. Kal. Jan.                   |

<sup>1</sup> From i. 16, 14, it is clear that Eusebius was *Pf. P. Italias*; but Dexter was *Pf. P. Italias*: cf. xi. 28, 2. Therefore Eusebius succeeded Dexter, and vi. 4, 27. *Dextro Pf. P.*, dated *Kal. Nov.*, is wrong either in the date or the name of the prefect. It follows that Theodorus was *Pf. P. Galliarum*.

<sup>2</sup> Caesarius succeeded Rufinus as *Pf. P. Orientis*. Rufinus is said to have been slain by Gainas and his Goths on November 27; therefore xvi. 5, 27, dated viii. Kal. Jul., needs emendation either in date or name of prefect.

# PUBLICATIONS OF THE ROYAL IRISH ACADEMY.

(Continued from page ii. of this Cover.)

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[For continuation of List of Publications, see page iv. of this Cover.]

# PUBLICATIONS OF THE ROYAL IRISH ACADEMY.

(Continued from page iii. of this Cover.)

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*For List of Publications of the Academy, see also pages ii. and iii. of this Cover.*

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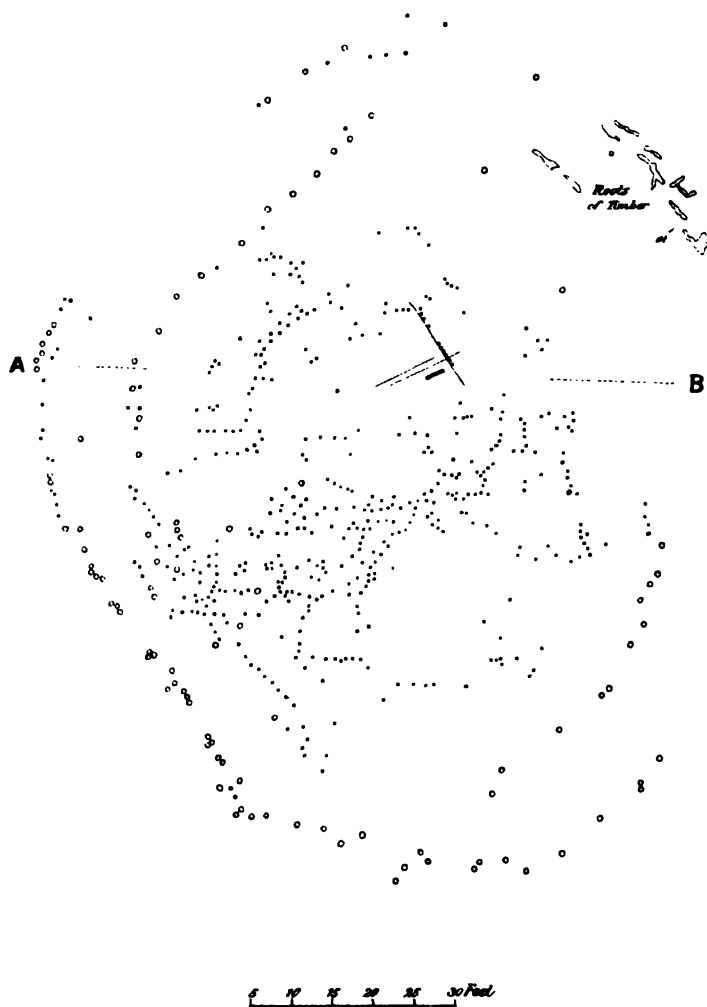
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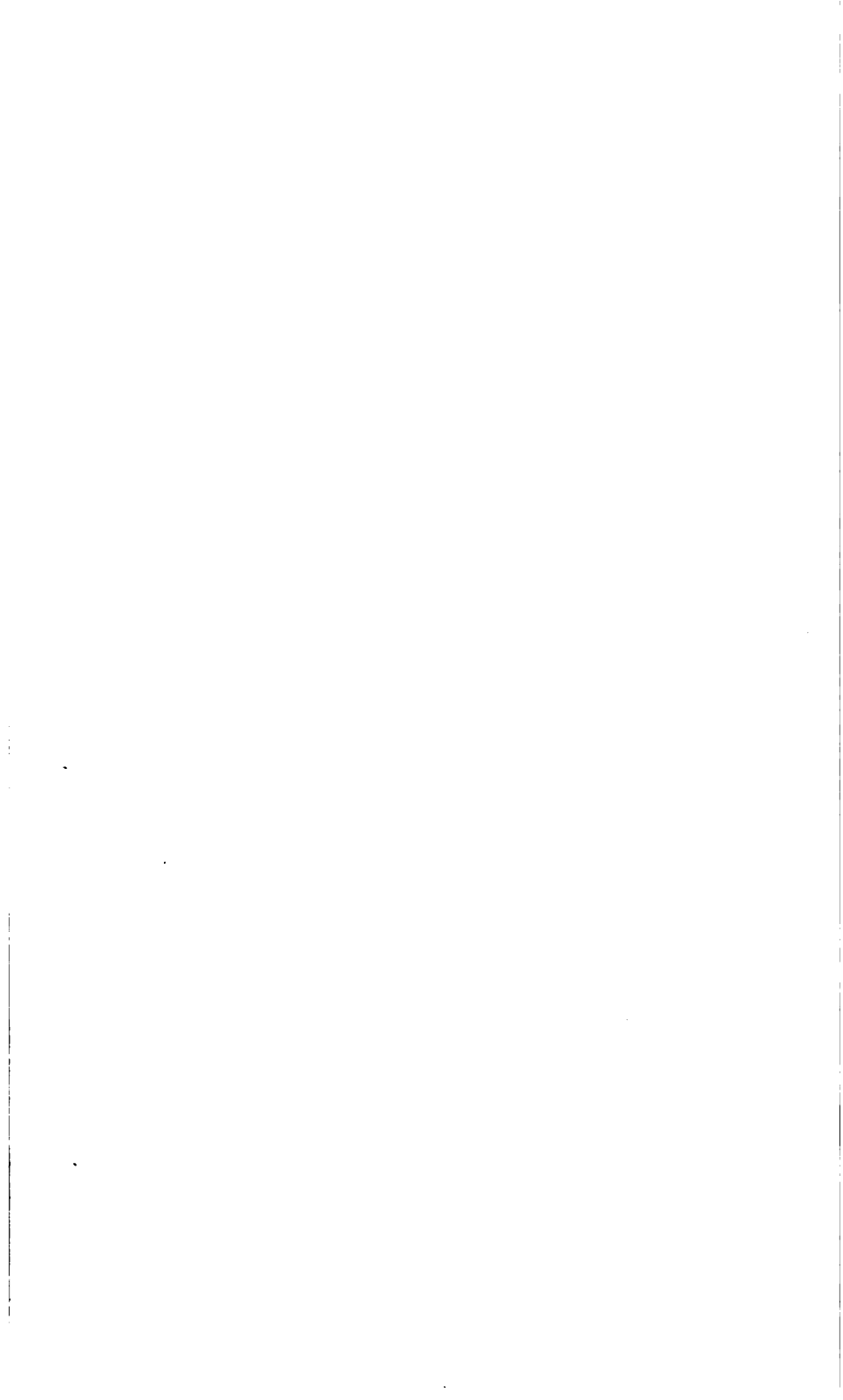
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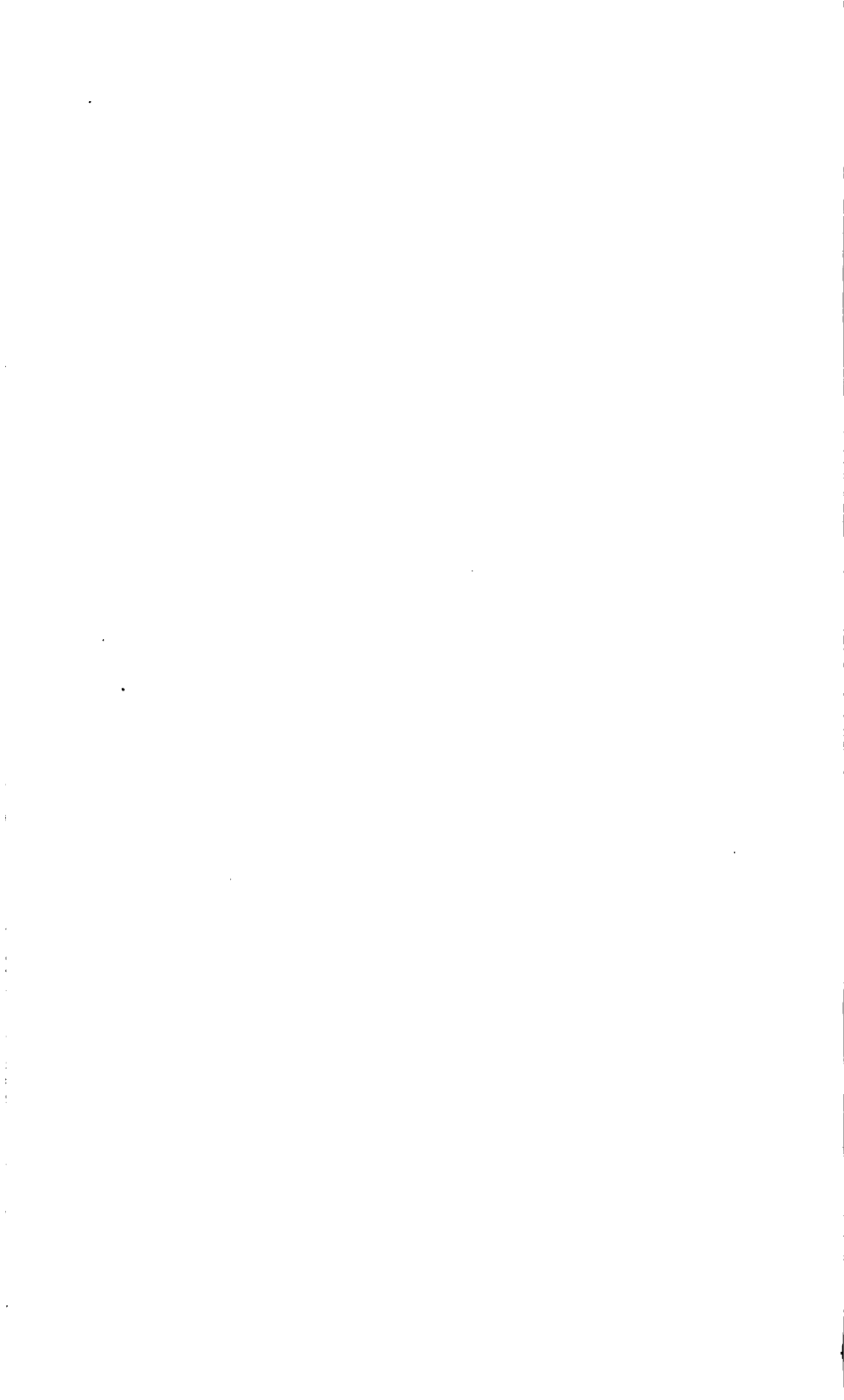
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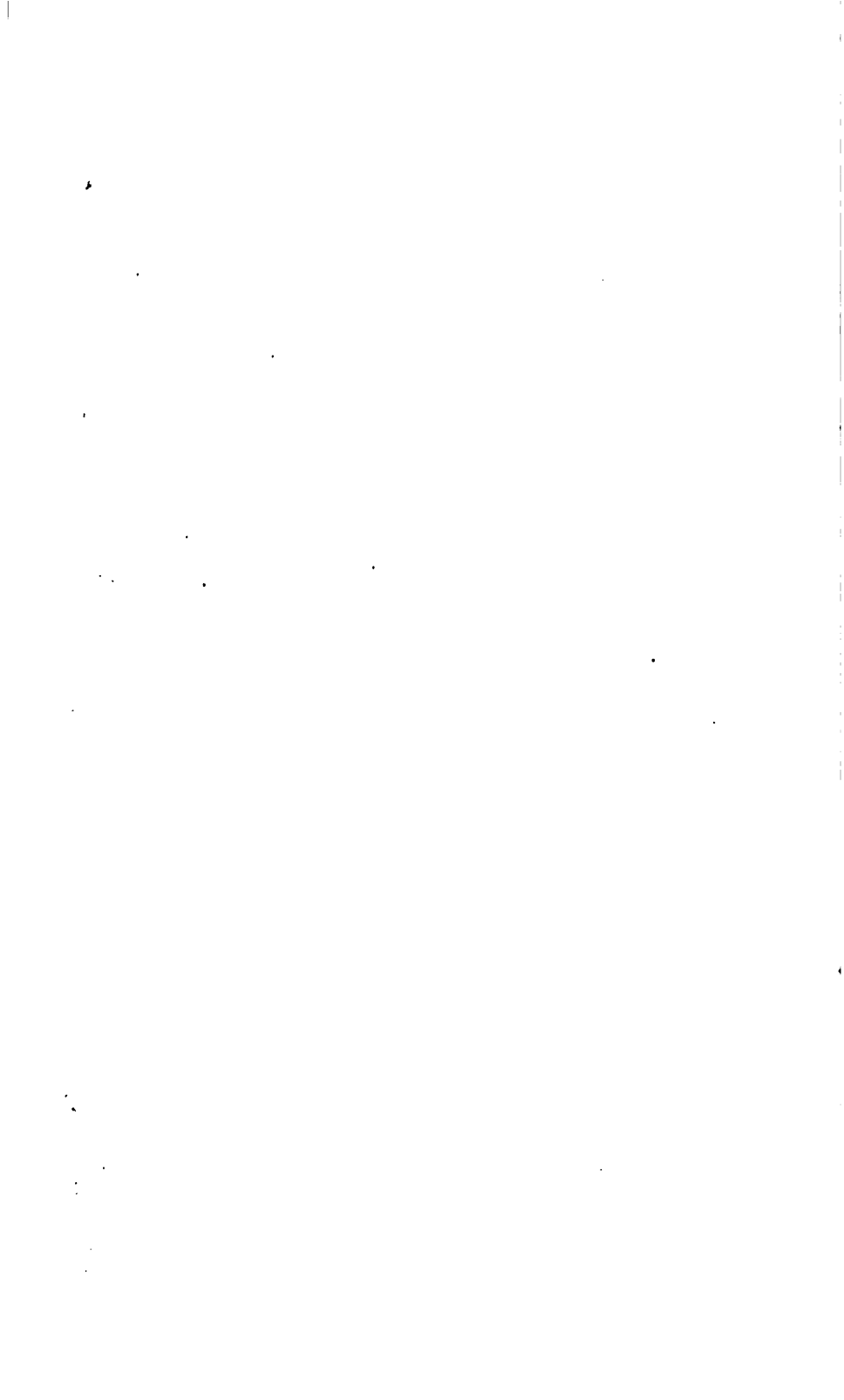


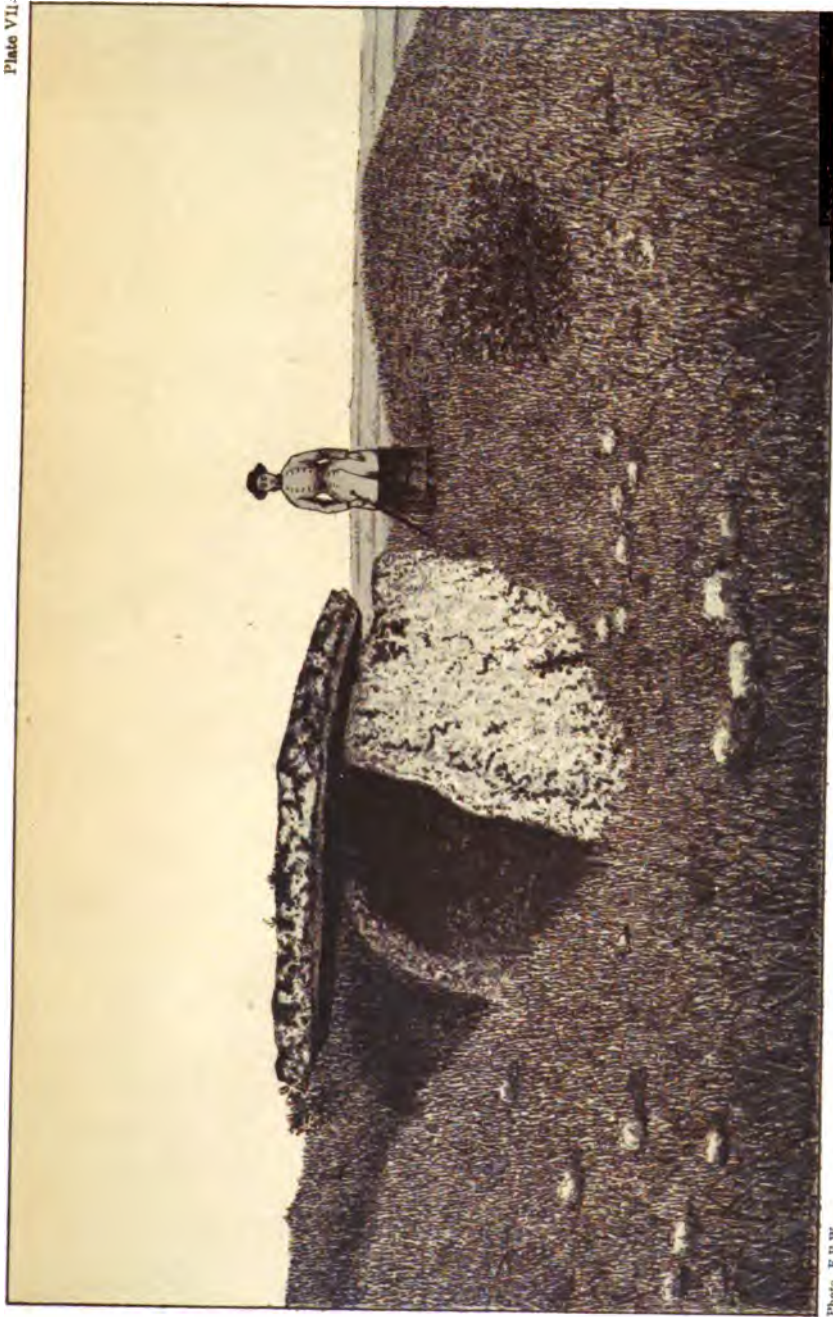












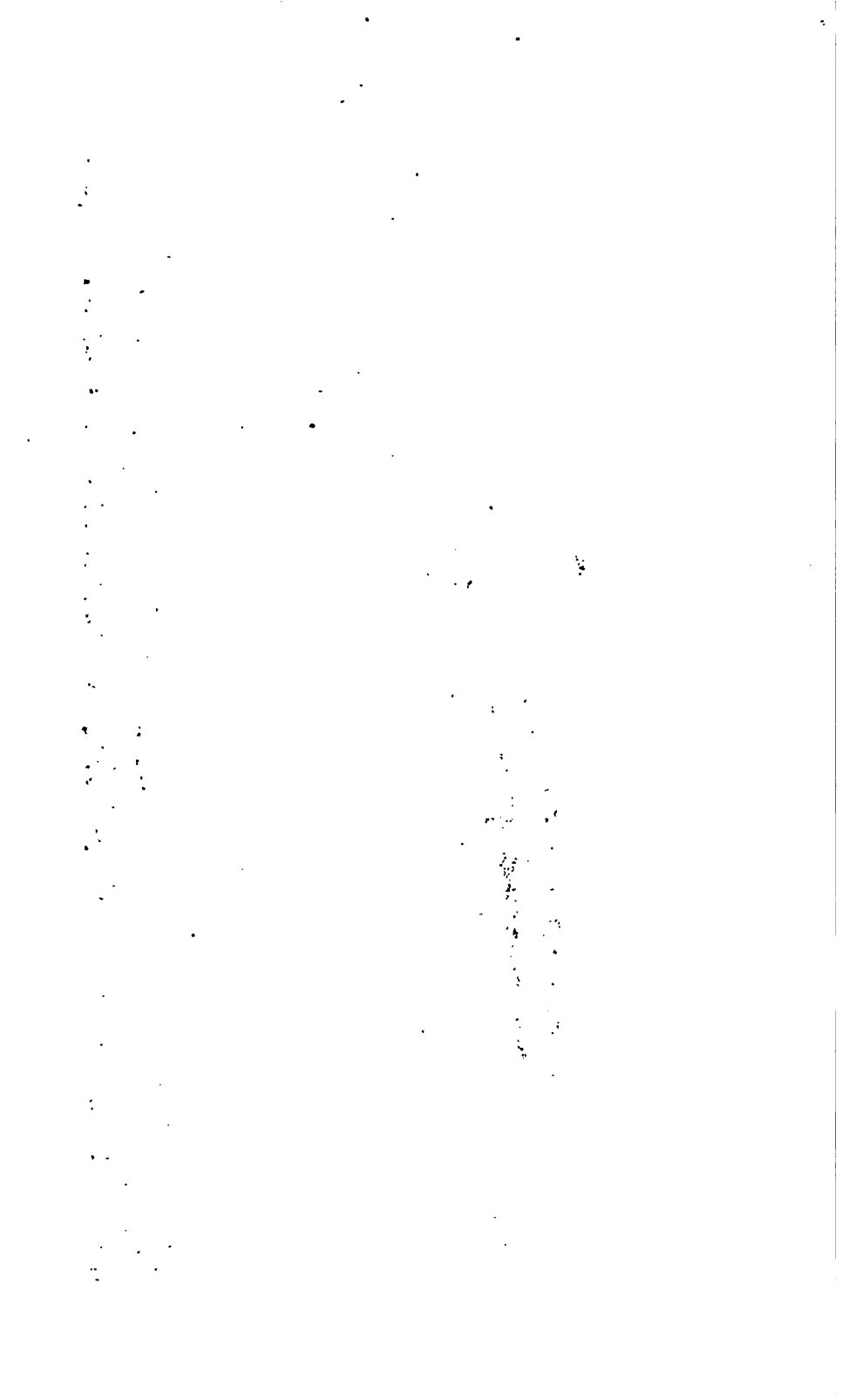
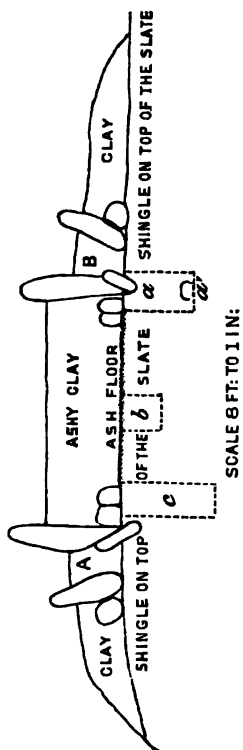
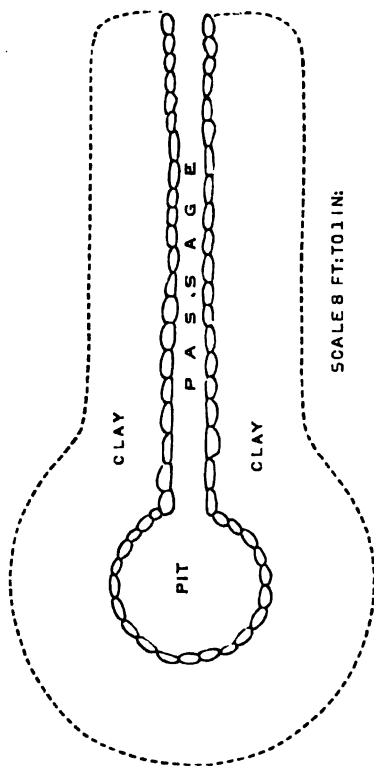


Fig. 3.



N. & S. Sections of the Cumber Circles, Wexford

Fig. 4.



Quaker's Hut, Cummerduff, Wexford.

Fig. 1.

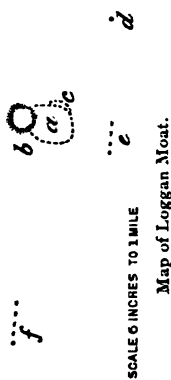
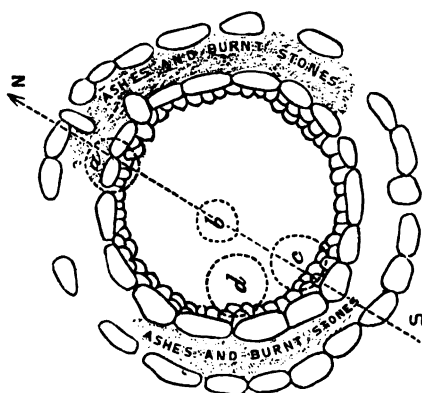


Fig. 2.



Plan of the Cumber Circles, Wexford.



Fig. 1.

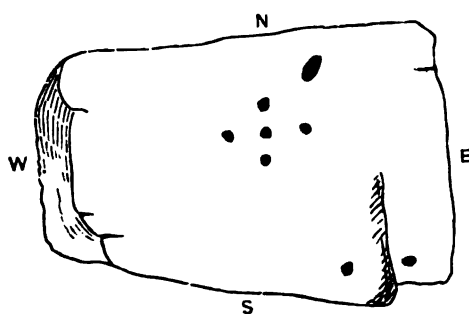
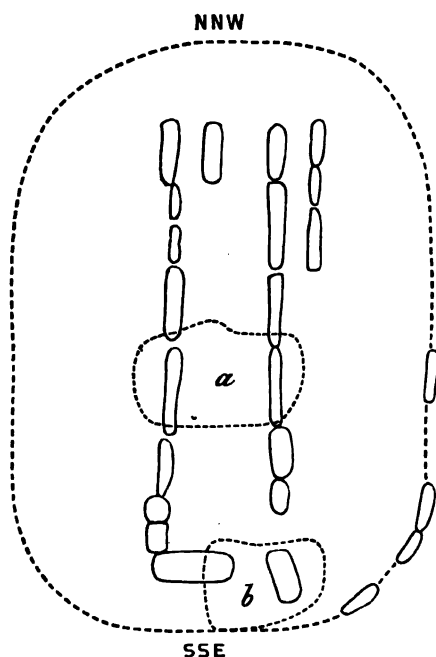


Table-stone, Connagh Hill, Wexford.

Fig. 2.



SCALE 10 FT. TO 1 IN.

Plan of Labbanasigha, Wicklow.

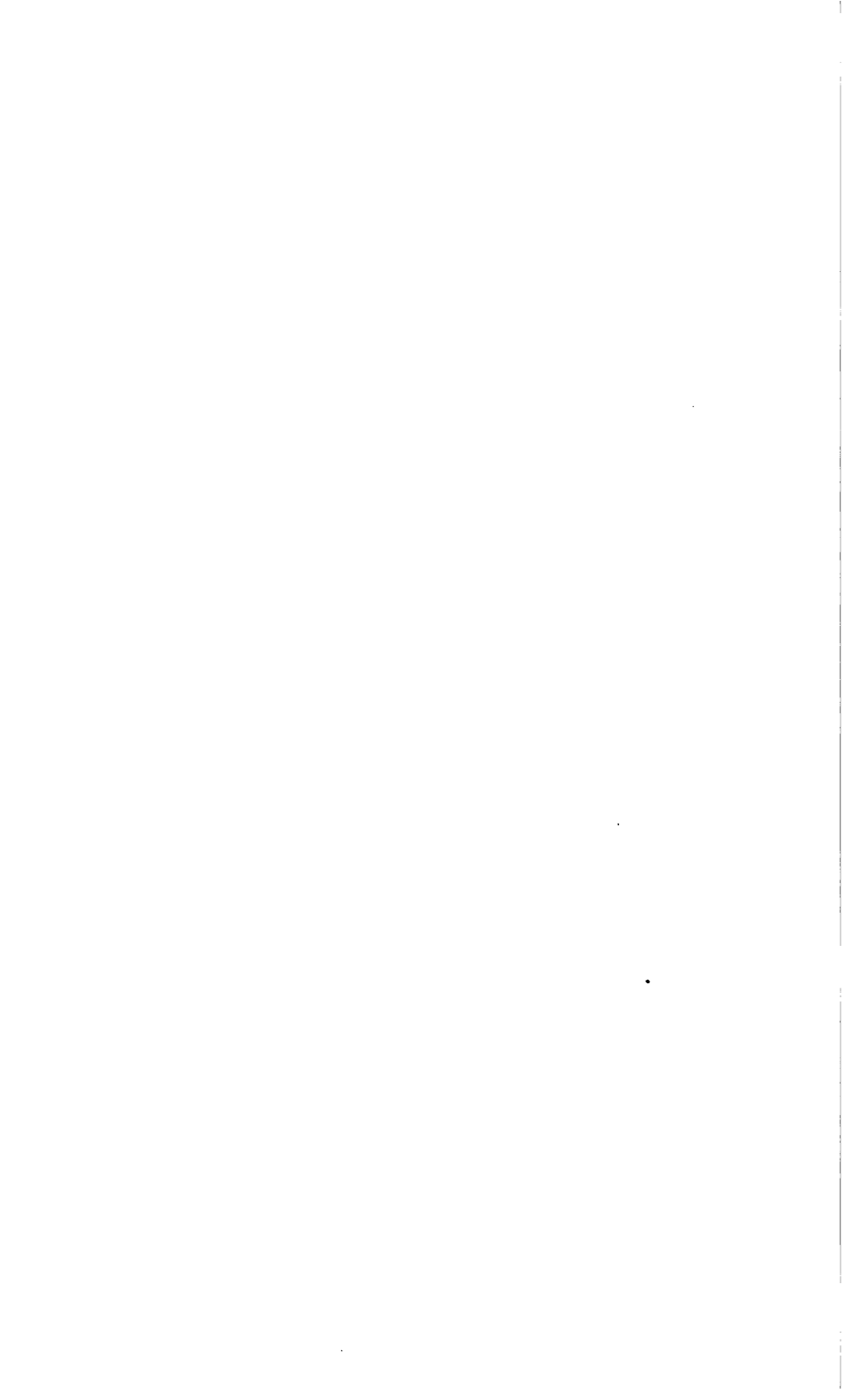
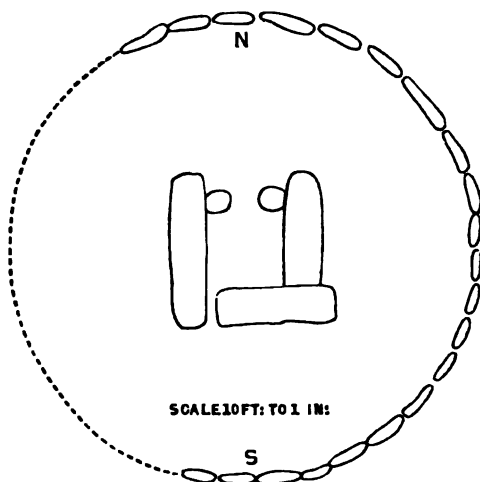
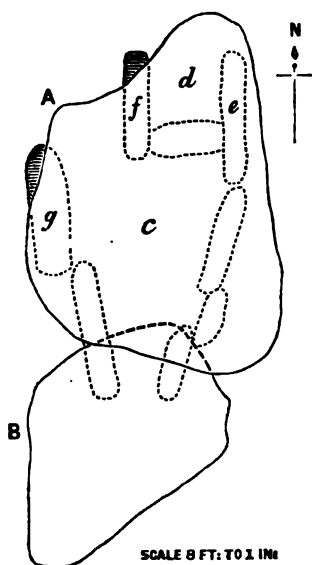


Fig. 1.



Plan of Structure, Myshall Hill, Carlow.

Fig. 2.

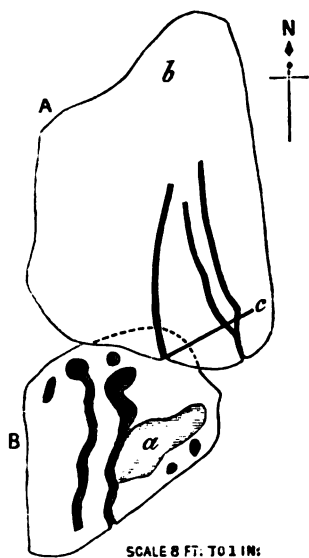


Plan of Accaun Cromleac.



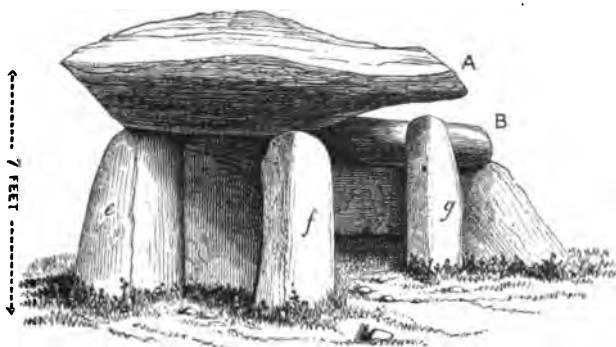


Fig. 1.



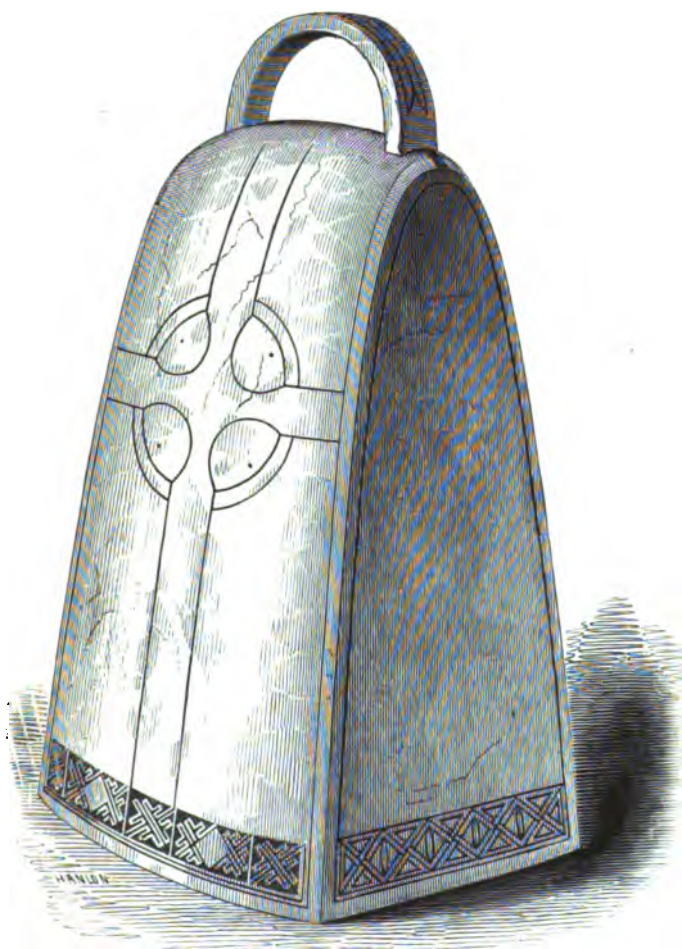
Cover Stones, Accaun Cromleac, showing Cups and Furrows.

Fig. 2.

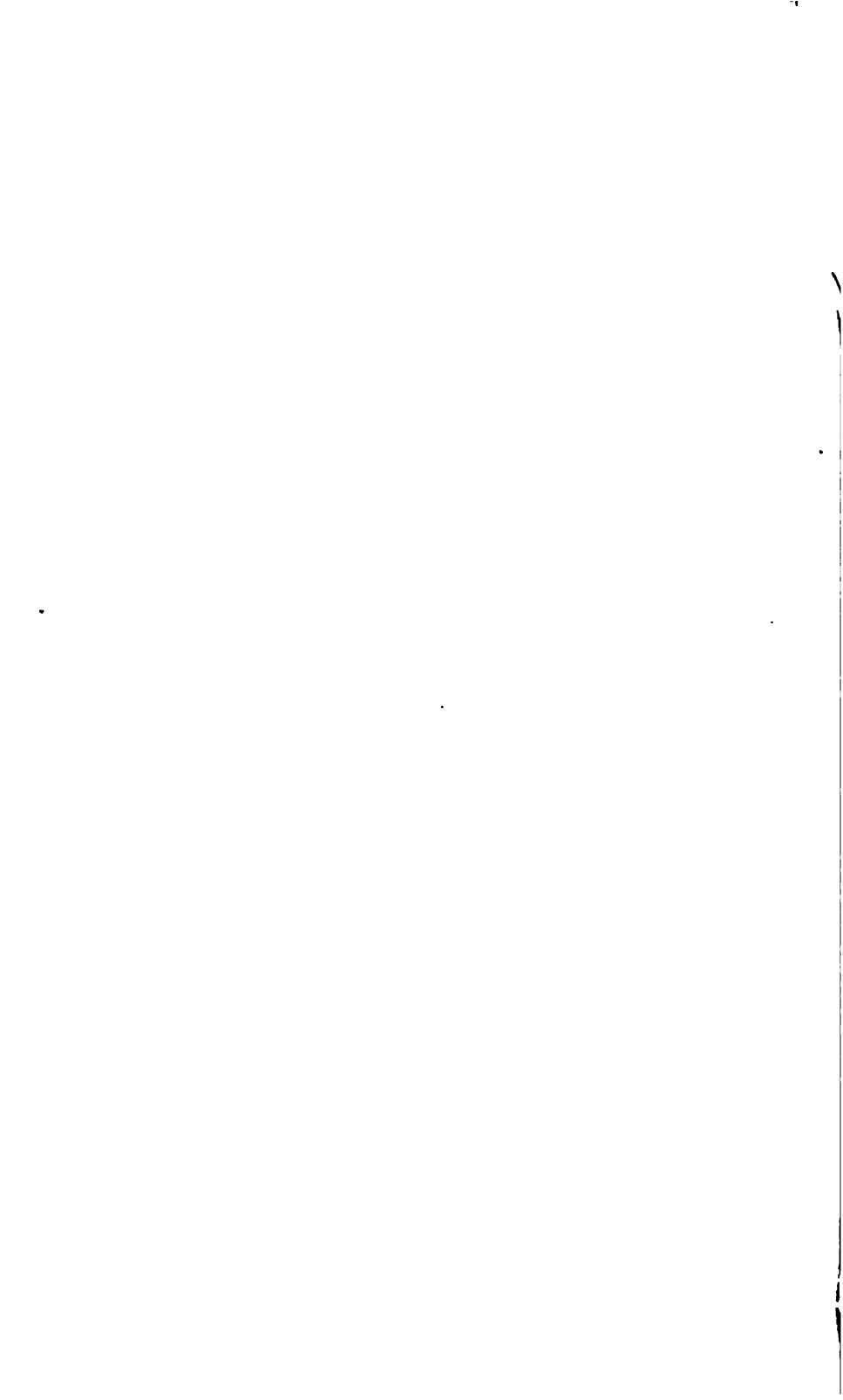




Accaun Cromleac, looking south-south-east.






BELL FROM LOUGH LENE.

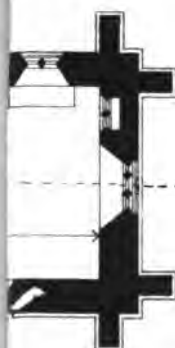


 CASTLE WALLS ———  
 ABBAY " " ———



QUIN : ABBEY : C<sup>o</sup> CLARE : ———

 *of Feet* ———



B: ——— GROUND : PLAN: ———

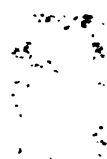




Fig. 1.—Front view. 1.



Fig. 1.—Edge view.

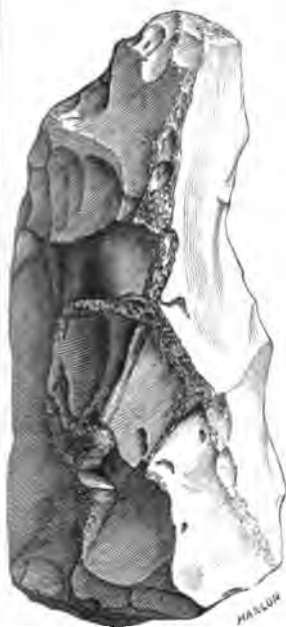


Fig. 2.—Front view. 1.



Fig. 2.—Section.



Fig. 2.—Edge view.





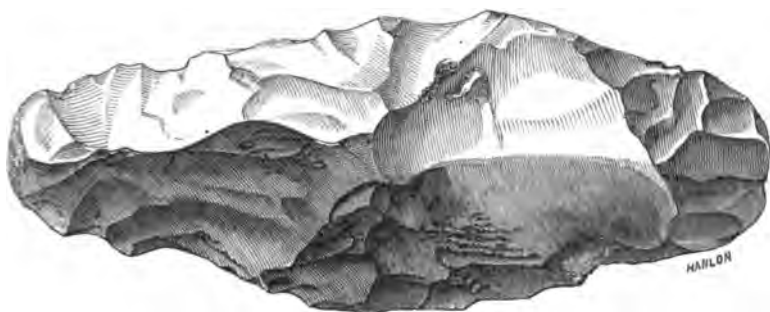


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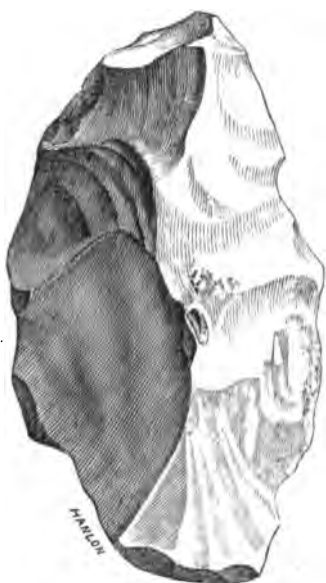


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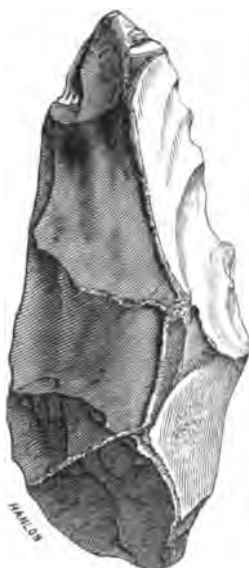


Fig. 5. 1.



Fig. 4—Section.



Fig. 5—Section.



For  
knu

*Chapel of the B.V. Mary*

Scale 0 5 10 20 30 40 50

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*Probable Site of  
the Infirmary.*

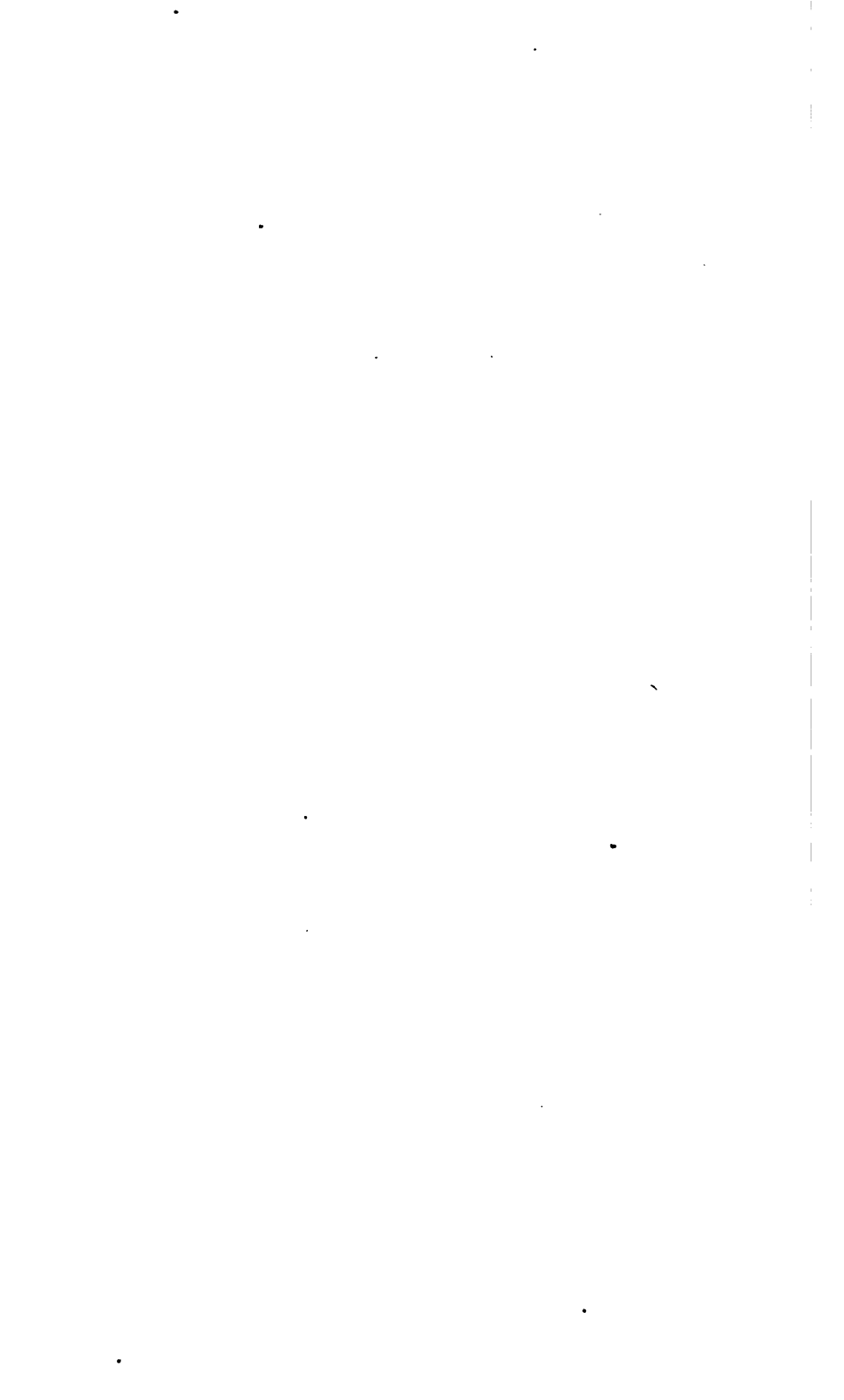
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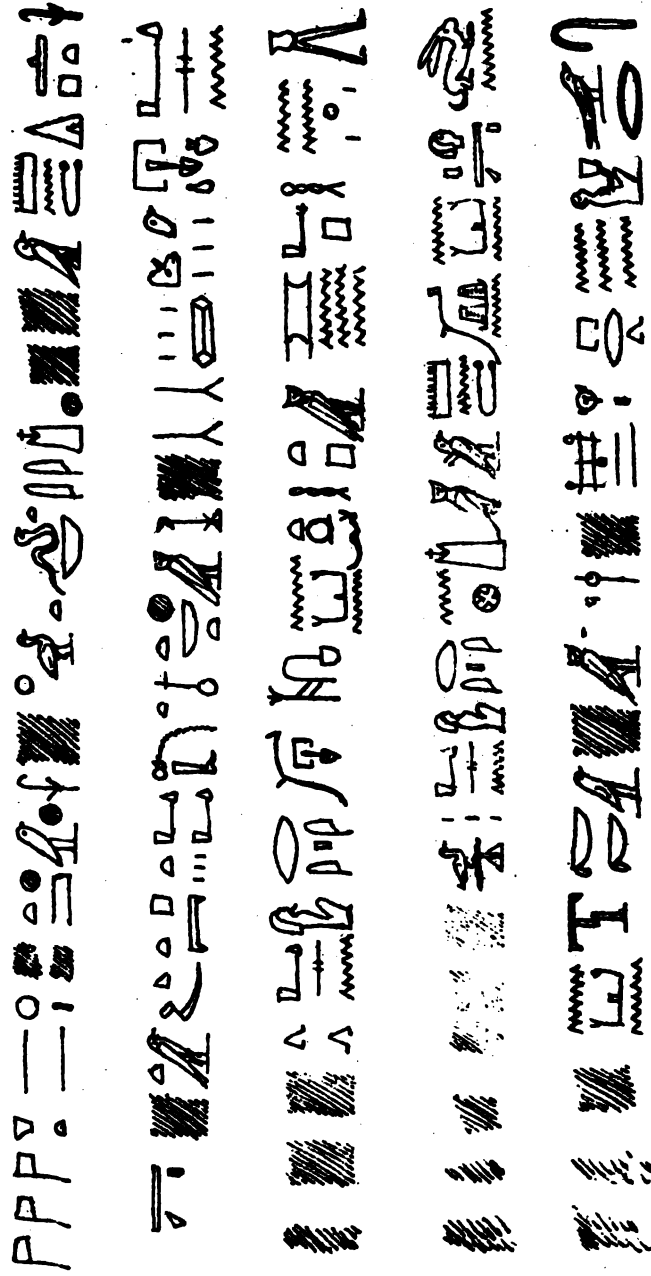
*Chapel of the B.V. Mary*

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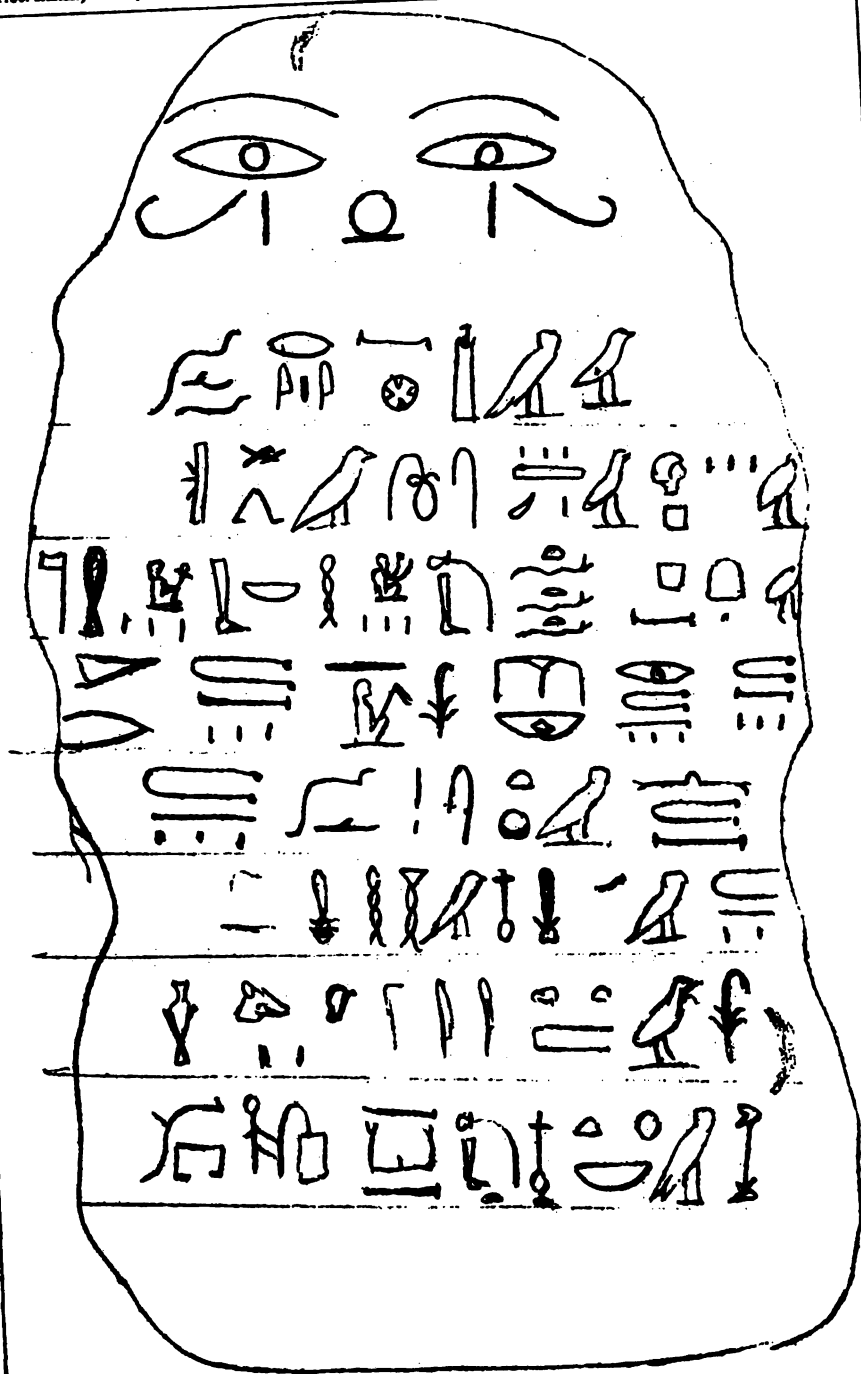




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INSCRIPTION ON BACK OF FIGURE OF RUI.





SCARABÆI.



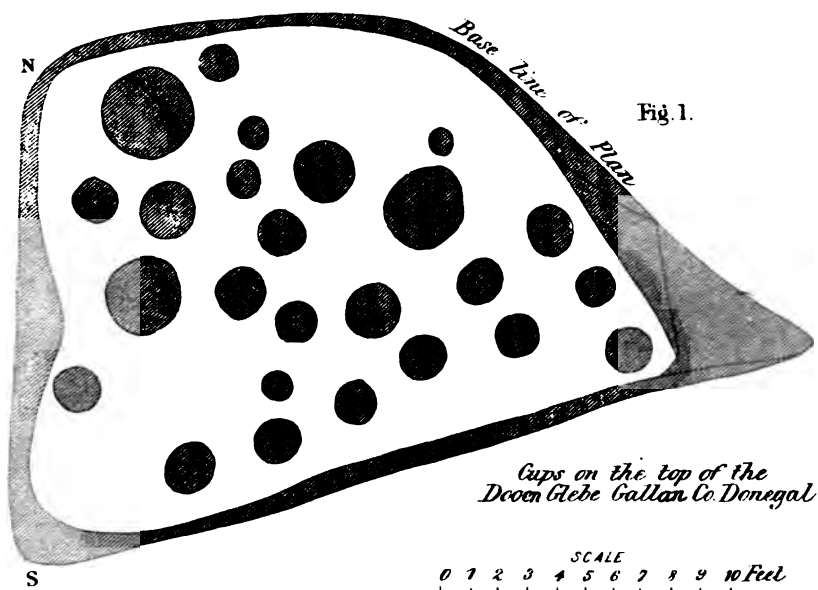


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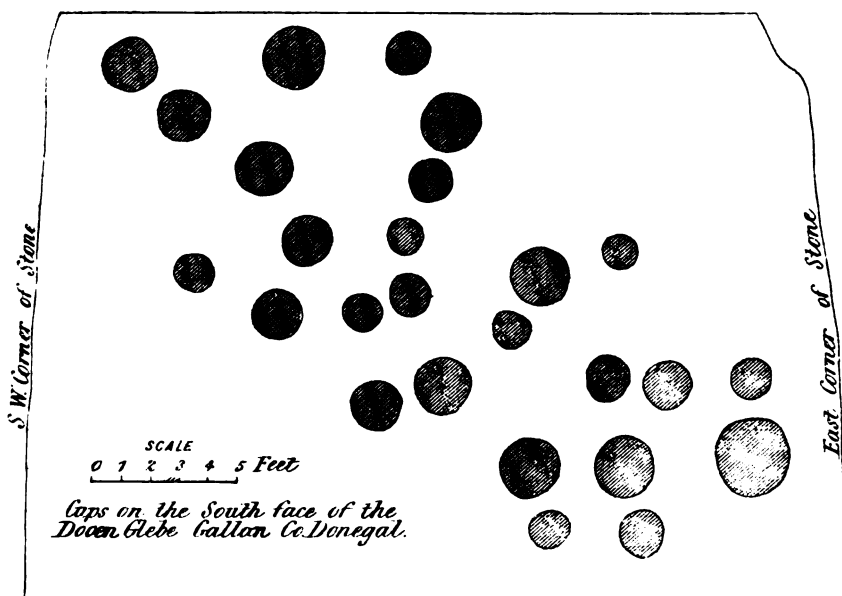
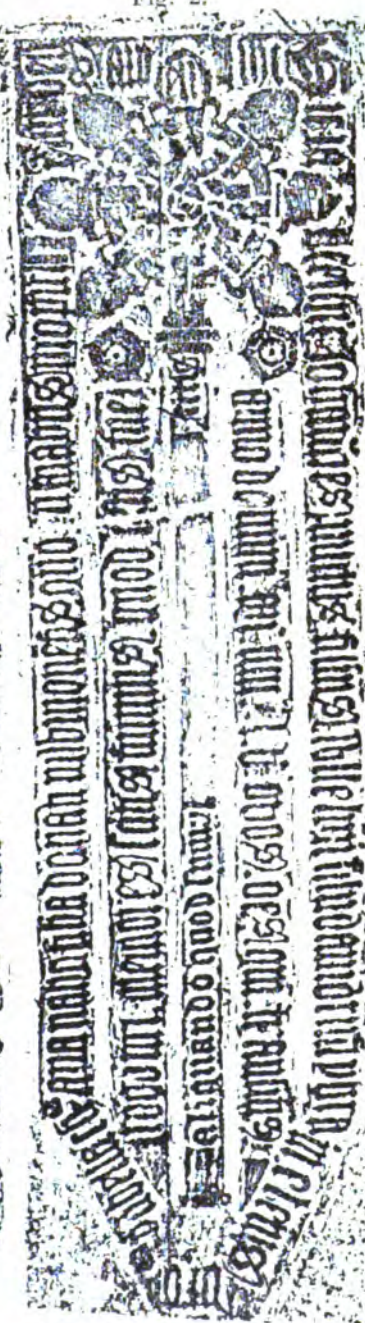




Fig. 1.

Fig. 2.



Rubbing taken 4 Oct. 1884. P.D.V.

BISHOP MATHEW SANDERS  
OLD LEIGHLIN CATHEDRAL  
C. CARLOW  
1884.

Taken 4 Oct. 1884 OLD LEIGHLIN CATHEDRAL -  
County Wick. Carlin  
1884



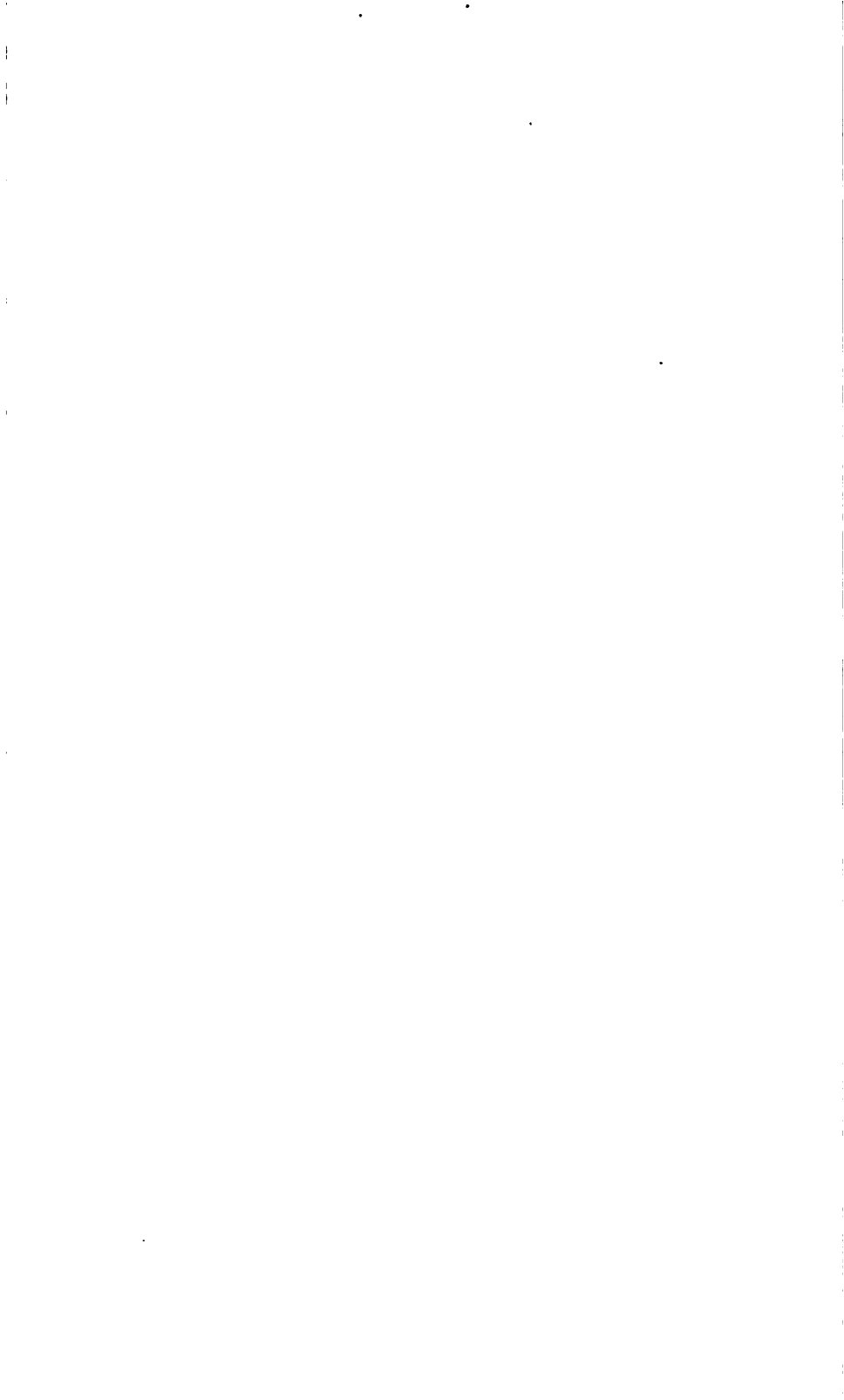


Fig. 3.







*Fig. 1 1/2.*



*Fig. 1.*



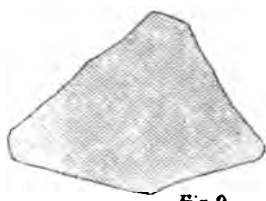
*Fig. 2 1/2.*



*Fig. 4 1/2.*



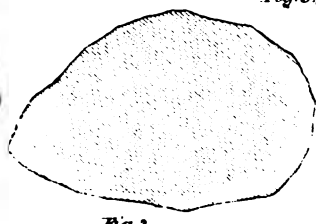
*Fig. 3 1/2.*



*Fig. 2.*



*Fig. 4.*



*Fig. 3.*



*Fig. 3.*





*Fig. 5 1/2.*



*Fig. 5 1/2.*



*Fig. 6 1/2.*



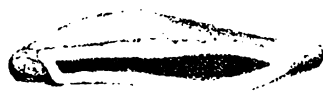
*Fig. 6 1/2.*



*Fig. 7 1/2.*



*Fig. 8.*



*Fig. 9 1/2.*



*Fig. 10 3/4.*





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AND  
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DUBLIN,

1ST OF DECEMBER, 1880.



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1880



**THE ROYAL IRISH ACADEMY.**

**A.D. 1880.**

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- (4) JOHN CASEY, LL.D., F.R.S., (1880).

## Officers :

*(Elected annually by the Academy ; with date of first election.)*

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| TREASURER, . . . . .                           | { REV. MAXWELL H. CLOSE, M.A.<br>(1878). |
| SECRETARY, . . . . .                           | { ALEXANDER MACALISTER.<br>M.D., (1880). |
| SECRETARY OF THE COUNCIL, . . . . .            | { ROBERT ATKINSON, LL.D., (1878).        |
| SECRETARY OF FOREIGN CORRESPONDENCE, . . . . . | { JOSEPH P. O'REILLY, C.M., (1880).      |
| LIBRARIAN, . . . . .                           | { JOHN T. GILBERT, F.S.A., (1878).       |

|   |                                |
|---|--------------------------------|
| <i>Clerk of the Academy (elected annually by the Academy)</i> . . . . . | { ALFRED EDGAR, B.A. (1880).   |
| <i>Curator, Museum-Clerk, and Housekeeper,</i> . . . . .                | CAPT. ROBERT MACENIRY, (1872). |
| <i>Assistant Accountant,</i> . . . . .                                  | MR. ROBERT G. ROBSON, (1880).  |
| <i>Library Clerk,</i> . . . . .   | MR. J. J. MACSWEENEY, (1869).  |
| <i>Serjeant-at-Mace,</i> . . . . .                                      | MR. J. J. MACSWEENEY, (1877).  |

## Committees appointed by Council :

*These Committees are composed of the Members of Council, to whose names the subjoined numbers are prefixed in the foregoing list :*

|                                       |  |
|---------------------------------------|--|
| <i>Museum,</i> . . . . .              | Committee of Polite Literature and Antiquities. Sec. No. 15. |
| <i>Publication,</i> . . . . .         | 4, 5, 6, 9, 10 (Sec.), 15, 17, 18, 19.                       |
| <i>Library,</i> . . . . .             | 3, 6, 7, 11, 12, 13, 15, 17, 18 (Sec.), 19, 21.              |
| <i>Irish Manuscripts,</i> . . . . .   | 10, 11, 12, 13, 14, 15 (Sec.), 16, 17, 18, 19, 21.           |
| <i>Economy &amp; House,</i> . . . . . | 1, 7, 8, 10, 12, 16, 17, 19 (Sec.), 20.                      |

# MEMBERS OF THE ROYAL IRISH ACADEMY.

## ORDINARY MEMBERS.

The sign \* is prefixed to the names of Life Members.

The sign † indicates the Members who have not yet been formally admitted.

The sign § indicates the Members who have contributed papers to the Transactions of the Academy.

N.B.—The names of Members whose addresses are not known to the Secretary of the Academy, are printed in italics. He requests that they may be communicated to him.

| Date of Election. |   |
|-------------------|---|
| 1866. Jan. 8      | Adams, Rev. Benjamin William, D.D. <i>The Rectory, Santry, Co. Dublin.</i>  |
| 1843. April 10    | *§Allman, George James, M.D. (Dub. and Oxon.), LL.D., Pres. Lin. Soc., F.R.C.S.I., F.R.SS., Lond. & Edin., Royal Medallist R.S., 1873. <i>Parkstone, Dorsetshire; Queen Anne's Mansions, St. James's-park, London</i> |
| 1871. June 12     | *†Amherst, William Amhurst Tyssen, D.L., F.S.A., M.R.S.L. <i>Didlington Hall, Brandon, Norfolk.</i>   |
| 1873. Jan. 13     | Andrews, Arthur, Esq. <i>Newtown House, Blackrock, Co. Dublin.</i>  |
| 1839. Jan. 14     | *§Andrews, Thomas, M.D., LL.D. (Edin.), F.R.S., Hon. F.R.S.E., F.C.S., Royal Medallist, R.S., 1844. <i>Belfast.</i>   |
| 1880. June 28     | †Anglin, Arthur H., M.A. <i>Collegiate House, Broomfield-park, Sheffield.</i>   |
| 1828. April 28    | *§Apjohn, James, M.D., F.R.S., F. and Hon. F., K. & Q.C.P.I., F.C.S., Professor of Mineralogy and of Applied Chemistry, Univ. Dub. <i>South Hill, Blackrock, Co. Dublin.</i>  |
| 1870. Jan. 10     | *Archer, William, F.R.S. <i>St. Brendan's, Grosvenor-road, E., Rathmines, Co. Dublin.</i>   |
| 1870. April 11    | †Ardilaun, Right Hon. Arthur, Baron, M.A., D.L. <i>Ashford, Cong, Co. Galway; St. Anne's, Clontarf, Co. Dublin.</i>   |
| 1875. Jan. 11     | Atkinson, Robert, LL.D., Professor of Sanskrit and Comparative Philology, Univ. Dub., Secretary of Council of the Academy. <i>Clareville, Upper Rathmines, Co. Dublin.</i>  |
| 1872. April 8     | Baily, William Hellier, F.L.S., F.G.S., Geological Survey of Ireland, Demonstrator in Palæontology, R.C.Sc.I. <i>Apsley Lodge, 92, Rathgar-road, Co. Dublin; 14 Humu-street, Dublin.</i>                              |

| Date of Election. |   |
|-------------------|---|
| 1866. June 11     | Baker, John A., F.R.C.S.I. 4, <i>Clare-st., Dublin.</i>   |
| 1872. June 24     | Baldwin, Thomas, Esq. <i>Albert Farm, Glasnevin, Co. Dublin.</i>  |
| 1840. April 13    | *Ball, John, M.A., F.R.S., F.L.S. 10, <i>Southwell Gardens, South Kensington, London, S.W.</i>  |
| 1870. Jan. 10     | §Ball, Robert Stawell, LL.D., F.R.S., F.R.A.S., Andrews Professor of Astronomy in the University of Dublin, and Royal Astronomer of Ireland. <i>The Observatory, Dunsink, Co. Dublin.</i> |
| 1842. Jan. 10     | *Banks, John T., M.D., F.K. & Q.C.P.I. 10, <i>Merrion-square, East, Dublin.</i>   |
| 1868. Jan. 13     | *Barker, W. Oliver, M.D., M.R.C.S.E. 6, <i>Gardiner's-row, Dublin.</i>  |
| 1874. May 11      | Barrett, William F., F.R.S.E., Professor of Physics, Royal College of Science. 18, <i>Belgrave-square, N., Monkstown, Co. Dublin.</i>   |
| 1866. May 14      | Barrington, Sir John, D.L. <i>St. Anne's, Killiney, Co. Dublin.</i>   |
| 1880. Feb. 9      | *†Barry, Michael, M.D. 56, <i>Ventnor-villas, Brighton.</i>   |
| 1880. Feb. 9      | †Barter, Rev. John B. <i>Rose Hill, Rostellan, Middleton, Co. Cork.</i>   |
| 1879. Feb. 10     | *Beaney, James G., M.D. <i>Melbourne, Australia.</i>  |
| 1878. June 24     | †Beattie, Joseph A., L.R.C.S.I. <i>Mount Blacquiere, Royal Canal, Dublin.</i>   |
| 1865. Jan. 9      | *Beauchamp, Robert Henry, Esq. 14, <i>Lower Fitzwilliam-street, Dublin.</i>   |
| 1863. April 27    | *Belmore, Right Hon. Somerset-Richard, Earl of, M.A., D.L., K.C.M.G. <i>Castle Coole, Enniskillen.</i>  |
| 1866. June 11     | Bennett, Edward Hallaran, M.D., M.Ch., F.R.C.S.I., F.R.G.S.I., Professor of Surgery in the University of Dublin. 26, <i>Lower Fitzwilliam-street, Dublin.</i>                             |
| 1851. June 8      | †Beresford, Right Hon. and Most Rev. Marcus G., D.D., D.C.L., Lord Archbishop of Armagh, Primate of all Ireland. <i>The Palace, Armagh.</i>   |
| 1846. April 13    | *Bevan, Philip, M.D. (Dub.), Prof. of Anatomy and Fellow R.C.S.I. 52, <i>Fitzwilliam-square, West, Dublin.</i>  |
| 1843. Jan. 9      | *Blacker, Stewart, M.A., J.P. <i>Carrick Blacker, Portadown.</i>  |
| 1876. Jan. 10     | *Blake, John A., M.P. 12, <i>Ely-place, Dublin.</i>   |
| 1879. Jan. 13     | Blake, George Dennis, Esq. <i>St. Columba, Sallybrack, Co. Dublin.</i>  |
| 1871. Jan. 9      | Bourke, Very Rev. (Canon) Ulick J. <i>Kilcolman, Claremorris.</i>   |
| 1873. April 14    | †Boyd, Michael A., F.R.C.S.I., L.K. & Q.C.P.I. 90, <i>Upper George's-street, Kingstown, Co. Dublin.</i>   |

*List of Members.*

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| Date of Election. |   |
|-------------------|---|
| 1854. April 10    | *Brady, Cheyne, Esq. ( <i>Abroad.</i> )   |
| 1849. April 9     | *Brady, Daniel Fredk., F.R.C.S.I., M.R.C.S.E. <i>La Choza, Rathgar-road, Co. Dublin.</i>  |
| 1858. April 12    | †Brooke, Thomas, D.L. <i>The Castle, Lough Eske, Co. Donegal.</i>   |
| 1878. May 13      | †Browne, John, Esq. <i>Drapersfield, Cookstown, Co. Tyrone.</i>   |
| 1851. Jan. 13     | *Browne, Robert Clayton, M.A., D.L. <i>Browne's Hill, Carlow.</i>   |
| 1874. Feb. 9      | †Burden, Henry, M.A., M.D., M.R.C.S.E. 9, <i>College-square, North, Belfast.</i>  |
| 1854. April 10    | Burke, Sir John Bernard (Ulster), LL.D., C.B. <i>Tullamaine Villa, Upper Leeson-street, Dublin.</i>   |
| 1878. Feb. 11     | §Burton, Charles E., A.B., F.R.A.S. <i>Loughlinstown, Co. Dublin.</i>   |
| 1855. Jan. 8      | *Butcher, Richard G., M.D., F.R.C.S.I., M.R.C.S.E. 19, <i>Lower Fitzwilliam-street, Dublin.</i>   |
| 1866. April 9     | Byrne, John A., B.A., M.B. (Dub.) 37, <i>Westland-row, Dublin.</i>  |
| 1876. May 8       | Byrne, William H., C.E. <i>Sunbury Gardens, Palmers-ton-park, Rathmines, Co. Dublin.</i>  |
| 1862. April 14    | Campbell, John, M.D., Professor of Chemistry C.U.I. 161, <i>Rathgar-road, Co. Dublin.</i>   |
| 1873. May 12      | †Carlingford, Right Hon. Chichester, Baron, Lord Lieutenant of Essex. <i>Red House, Ardee; 7, Carlton Gardens, London, S.W.</i>   |
| 1838. Feb. 12     | *Carson, Rev. Joseph, D.D., S.F.T.C.D., F.R.G.S.I. 18, <i>Fitzwilliam-place, Dublin.</i>  |
| 1855. Feb. 12     | Carte, Alexander, M.D., F.R.C.S.I., F.R.G.S.I. Director of the Natural History Museum, Science and Art Department, Leinster House. 14, <i>Northbrook-road, Dublin.</i>            |
| 1876. Jan. 10     | †Carton, Richard Paul, Q.C. 35, <i>Rutland-square, West, Dublin.</i>  |
| 1866. May 14      | §Casey, John, LL.D., F.R.S., Professor of Higher Mathematics and Mathematical Physics, C.U.I., a Vice-President of the Academy. <i>Iona-terrace, South Circular-road, Dublin.</i> |
| 1873. Jan. 13     | †Castletown of Upper Ossory, Right Hon. John-Wilson, Baron, Lieutenant of the Queen's County. <i>Lisduff, Errill, Templemore.</i>   |
| 1878. May 13      | *Cathcart, George L., M.A., F.T.C.D. 106, <i>Lower Baggot-street, Dublin.</i>   |
| 1843. Jan. 8      | *Cather, Thomas, J.P. <i>Limavady.</i>  |
| 1842. June 13     | *Chapman, Sir Benjamin J., Bart., D.L. <i>Killua Castle, Clonmellon.</i>  |

| Date of Election. |   |
|-------------------|---|
| 1864. Jan. 11     | Charlemont, Right Hon. James-Molyneux, Earl of, K.P., Lieutenant of the County Tyrone. <i>Roxborough Castle, Moy, Co. Armagh.</i> |
| 1876. April 10    | *Clarke, Rev. Francis E., M.A., M.D., L.K.Q.C.P.L., M.R.C.S.E. <i>Killinagh Rectory, Blacklion, Co. Cavan.</i>                    |
| 1842. Jan. 10     | *Clendinning, Alex., Esq.   |
| 1841. Jan. 11     | *†Clermont, Right Hon. Thomas, Baron, D.L. <i>Ravensdale Park, Newry.</i>   |
| 1867. May 18      | *Close, Rev. Maxwell H., M.A., F.R.G.S.I., F.G.S., Treasurer of the Academy. 40, <i>Lower Baggot-street, Dublin.</i>              |
| 1835. Nov. 30     | *Cole, Owen Blayney, D.L.   |
| 1866. April 9     | †Cooper, Lieut. Col. Edward H., Lieutenant of Co. Sligo. <i>Markree Castle, Collooney.</i>  |
| 1856. April 14    | Copland, Charles, Esq. <i>Royal Bank, Foster-place, Dublin; 7, Longford-terrace, Monkstown, Co. Dublin.</i>                       |
| 1878. June 24     | Corbet, William J., M.P. <i>Springfarm, Delgany.</i>  |
| 1864. May 9       | †Cotton, Charles Philip, B.A., C.E., F.R.G.S.I., <i>Ryecroft, Bray.</i>   |
| 1876. Apr. 10     | Cox, Michael Francis, M.A., L.R.C.S.I. <i>Sligo.</i>  |
| 1857. Aug. 24     | *Crofton, Denis, B.A., 8, <i>Mountjoy-square, North, Dublin.</i>  |
| 1866. June 11     | Cruise, Francis R., M.D., F.K. & Q.C.P.L., M.R.C.S.E. 3, <i>Merrion-square, West, Dublin.</i>                                     |
| 1870. Apr. 11     | Cruise, Richard Joseph, F.R.G.S.I., Geological Survey of Ireland. <i>Castleisland, Co. Kerry; 14, Hume-street, Dublin.</i>        |
| 1874. June 8      | Cryan, Robert, M.D., 54, <i>Rutland-square, West, Dublin.</i>   |
| 1876. Nov. 13     | *†Dalway, Marriott R., D.L. <i>Bella Hill, Carrickfergus.</i>   |
| 1853. April 11    | *Davies, Francis Robert, K.J.J. <i>Hawthorn, Blackrock, Co. Dublin.</i>   |
| 1855. May 14      | *Davy, Edmund W., M.A., M.D., Prof. of Med. Jurisprudence, R.C.S.I. <i>Fortfield Terrace, Templeogue, Co. Dublin.</i>             |
| 1846. April 13    | *D'Arcy, Matthew P., M.A., D.L. 6, <i>Merrion-square, East, Dublin.</i>   |
| 1876. Jan. 10     | Day, Robert, Jun., F.S.A. <i>Sidney-place, Cork.</i>  |
| 1876. Jan. 10     | Deane, Thomas Newenham, R.H.A., F.R.I.A.I. 3, <i>Upper Merrion-street, Dublin.</i>  |
| 1846. Jan. 12     | *Deasy, Right Hon. Rickard, LL.D., Lord Justice of Appeal in Ireland. <i>Carysfort House, Blackrock, Co. Dublin.</i>              |

| Date of Election. |  |  |
|-------------------|--|--|
| 1860. Jan. 9      |  | *Dickson, Rev. Benjamin, D.D., F.T.C.D. 3, <i>Kildare-place, Dublin.</i>   |
| 1876. Feb. 14     |  | Dillon, William, Esq. 2, <i>North Great George's-street, Dublin.</i>   |
| 1876. Jan. 10     |  | *§Doberck, William, Ph.D. <i>Observatory, Markree, Collooney.</i>  |
| 1847. Jan. 11     |  | *†Dobbin, Leonard, Esq. 27, <i>Gardiner's-place, Dublin.</i>   |
| 1851. Jan. 13     |  | *Dobbin, Rev. Orlando T., LL.D. <i>Sutton, Co. Dublin.</i>   |
| 1879. June 9      |  | *Doherty, William J., C.E. <i>Clonturk House, Drumcondra, Co. Dublin.</i>  |
| 1856. Feb. 11     |  | §Downing, Samuel, C.E., LL.D., F.R.G.S.I., Professor of Civil Engineering, <i>Dublin Univ. 4, The Hill, Monkstown, Co. Dublin.</i>   |
| 1876. June 26     |  | §Draper, Harry N., F.C.S. <i>Esterel, Temple-road, Upper Rathmines, Co. Dublin.</i>  |
| 1843. Jan. 9      |  | *Drury, William Vallancey, M.D. <i>Bournemouth.</i>  |
| 1861. Feb. 11     |  | Duncan, James Foulis, M.D., F.K. & Q.C.P.I. 8, <i>Merrion-street, Upper, Dublin.</i>   |
| 1867. Feb. 11     |  | Ellis, George, M.B., F.R.C.S.I. 91, <i>Lower Leeson-street, Dublin.</i>  |
| 1841. April 12    |  | *Emly, Right Hon. William, Baron, Lieutenant of the County Limerick. <i>Tervoe, Limerick; Athenæum Club, London, S.W.</i>  |
| 1846. Jan. 12     |  | *Enniskillen, Right. Hon. William-Willoughby, Earl of, LL.D., D.C.L., D.L., F.R.S., F.R.G.S.I., one of the Trustees of the Hunterian Museum, R.C.S., London. <i>Florence Court, Co. Fermanagh, 65, Eaton-place, London, S.W.</i> |
| 1867. April 8     |  | *Farrell, Thomas A., M.A. Care of Messrs. Kelly and Co., <i>Lower Gardiner-street, Dublin.</i>   |
| 1834. Mar. 15     |  | *§Ferguson, Sir Samuel, LL.D., Q.C. 20, <i>North Great George's-street, Dublin.</i>  |
| 1842. Jan. 10     |  | *Ferrier, Alexander, Esq. <i>Knockmaroon Lodge, Chapelizod, Co. Dublin.</i>  |
| 1878. Feb. 11     |  | Fitzgerald, George F., M.A., F.T.C.D. 40, <i>Trinity College, Dublin.</i>  |
| 1857. Aug. 24     |  | Fitzgerald, Right Rev. William, D.D., Lord Bishop of Killaloe, &c. <i>Clarisford House, Killaloe.</i>  |
| 1870. May 23      |  | †FitzGibbon, Abraham, M.I.C.E. Lond. <i>The Rookery, Great Stanmore, Middlesex.</i>  |
| 1841. April 12    |  | *Fitzgibbon, Gerald, M.A., Master in Chancery. 10, <i>Merrion-square, North, Dublin.</i>   |



| Date of Election. |  |   |
|-------------------|--|---|
| 1875. Jan. 11     |  | Fitzpatrick, William John, LL.D., J.P. 75, <i>Pembroke-road, Dublin.</i>  |
| 1860. Jan. 9      |  | Foley, William, M.D., M.R.C.S.E. <i>Kilrush.</i>  |
| 1874. Feb. 9      |  | †Foster, Rev. Nicholas. <i>Ballymacelligott Rectory, Tralee.</i>  |
| 1876. Feb. 14     |  | Fottrell, George, Esq. 8, <i>North Great George's-street, Dublin.</i>   |
| 1888. Nov. 12     |  | *Frazer, George A., Captain R.N.  |
| 1866. May 14      |  | Frazer, William, F.R.C.S.I., F.R.G.S.I. 20, <i>Harcourt-street, Dublin.</i>   |
| 1865. April 10    |  | †Freeland, John, M.D. <i>Antigua, West Indies.</i>  |
| 1847. May 10      |  | *Freke, Henry, M.D. (Dub.), F.K.&Q.C.P.I. 68, <i>Lower Mount-street, Dublin.</i>  |
| 1873. April 14    |  | *†Frost, James, J.P. <i>Ballymorris, Cratloe, Co. Clare.</i>  |
| 1875. June 14     |  | Furlong, Nicholas, M.D. <i>Symington, Enniscorthy.</i>  |
|                   |  |   |
| 1859. Jan. 10     |  | Gages, Alphonse, Chev. L.H., F.R.G.S.I. <i>Royal College of Science, 51 Stephen's-green, East, Dublin.</i>  |
| 1845. April 4     |  | *Galbraith, Rev. Joseph Allen, M.A., F.T.C.D., F.R.G.S.I. 8, <i>Trinity College, Dublin.</i>  |
| 1878. May 13      |  | Galloway, Robert, F.C.S. 47 <i>Leeson-park, Dublin.</i>   |
| 1866. June 11     |  | Gallwey, Thomas, M.A., J.P. 42, <i>Harcourt-street, Dublin.</i>   |
| 1880. June 28     |  | Gannon, John Patrick, Esq. <i>Laragh, Maynooth.</i>   |
| 1864. Jan. 11     |  | Garnett, George Charles Lionel, M.A. 54, <i>Lansdowne-road, Dublin.</i>   |
| 1868. Feb. 9      |  | *Garstin, John Ribton, M.A., LL.B., F.S.A., F.R. Hist. Soc., Hon. F.R.I.A.I., J.P. <i>Braganstown, Castlebellingham, Co. Louth; Green-hill, Killiney, Co. Dublin.</i> |
| 1855. April 9     |  | *Gilbert, John Thomas, F.S.A., R.H.A., Librarian of the Academy. <i>Villa Nova, Blackrock, Co. Dublin.</i>  |
| 1876. May 8       |  | Gillespie, William, Esq. <i>Racefield House, Kingstown, Co. Dublin.</i>   |
| 1875. April 12    |  | *†Gore, J. E., C.E., A.I.C.E., F.R.A.S., F.R.G.S.I. <i>Dromard, Ballisodare, Co. Sligo.</i>   |
| 1836. May 25      |  | *Gough, Right Hon. George S., Viscount, M.A., D.L., F.L.S., F.G.S. <i>St. Helen's, Booterstown, Co. Dublin.</i>   |
| 1848. June 12     |  | *Graham, Andrew, Esq. <i>Observatory, Cambridge.</i>  |
| 1848. April 10    |  | *Graham, Rev. William, D.D. <i>Bonn.</i>  |
| 1876. April 10    |  | †Grainger, Rev. John, D.D. <i>Broughshane, Co. Antrim.</i>  |
| 1863. April 13    |  | †Granard, Right Hon. George-Arthur-Hastings, Earl of, K.P. <i>Castle Forbes, Co. Longford.</i>  |

| Date of Election. |  |
|-------------------|--|
| 1837. April 24    | *§Graves, Right Rev. Charles, D.D., F.R.S., Lord Bishop of Limerick, &c. <i>The Palace, Henry-street, Limerick.</i>  |
| 1874. Feb. 9      | Gray, William, Esq. 6, <i>Mount-Charles, Belfast.</i>  |
| 1867. April 8     | Green, James S., Q.C. 83, <i>Lower Leeson-street, Dublin.</i>  |
| 1872. April 8     | †Greene, John Ball, C.B., C.E., F.R.G.S.I., Commissioner of Valuation. 6, <i>Ely-place, Dublin.</i>  |
| 1857. June 8      | *Griott, Daniel G., M.A. 9, <i>Henrietta-street, Dublin.</i>   |
| 1873. Dec. 8      | *Guinness, Edward Cecil, M.A., D.L. 80, <i>Stephen's-green, South, Dublin.</i>   |
| 1875. Jan. 11     | Hamilton, Edward, M.D., F.R.C.S.I. 120, <i>Stephen's-green, West, Dublin.</i>  |
| 1879. Dec. 8      | Hamilton, Edwin, M.A. 40 <i>York-street, Dublin.</i>   |
| 1847. Jan. 11     | Hancock, William Neilson, LL.D. 64B, <i>Upper Gardiner-street, Dublin.</i>   |
| 1837. Feb. 13     | *§Hart, Andrew Searle, LL.D., Vice-Provost of T.C.D. 71, <i>Stephen's-green, South; Trinity College, Dublin.</i>   |
| 1874. Dec. 14     | *§Harvey, Reuben Joshua, M.D. 7, <i>Merrion-street, Dublin.</i>  |
| 1861. May 13      | Hatchell, John, M.A., J.P. 12, <i>Merrion-square, South, Dublin.</i>   |
| 1857. Aug. 24     | Hayden, Thomas, F.K. & Q.C.P.I., Prof. of Anatomy and Physiology, C.U.I. 18, <i>Merrion-square, North, Dublin.</i>   |
| 1845. Feb. 24     | *§Haughton, Rev. Samuel, M.A., M.D., D.C.L. (Oxon.), LL.D. (Cantab.), F.R.S., F.G.S., F.R.G.S.I., F.K. & Q.C.P.I., Hon. F.R.C.S.I., F.T.C.D., Professor of Geology in the University of Dublin, a Vice-President of the Academy. 31, <i>Upper Baggot-street, Dublin.</i> |
| 1852. April 12    | *Head, Henry H., M.D., P.K. & Q.C.P.I., F.R.C.S.I., F.R.G.S.I. 7, <i>Fitzwilliam-square, East, Dublin.</i>   |
| 1870. April 11    | †Heily, John Vickers, M.D. <i>Lisaduran Cottage, Rushworth, Melbourne, Victoria.</i>   |
| 1840. June 8      | *Hemans, George Willoughby, C.E., F.G.S. 1, <i>Westminster Chambers, Victoria-street, London, S.W.</i>   |
| 1851. Jan. 13     | *§Hennessy, Henry, F.R.S., Professor of Applied Mathematics and Mechanics in the Royal College of Science for Ireland, St. Stephen's-green, Dublin. 3, <i>Idrone-terrace, Blackrock, Co. Dublin.</i>   |
| 1865. Feb. 13     | *Hennessy, William Maunsell, Esq. 8, <i>Islington-avenue, Kingstown, Co. Dublin.</i>   |
| 1878. Jan. 13     | Hickie, James Francis, Lieut.-Col. (retired), J.P. <i>Slevoir, Roscrea, Co. Tipperary.</i>   |

| Date of Election. |   |
|-------------------|---|
| 1867. Feb. 11     | †Hill, John, C.E., F.R.G.S.I. <i>County Surveyor's Office, Ennis.</i>   |
| 1875. Jan. 11     | *Hill, Arthur, B.E., A.R.I.B.A. 22, <i>George's-street, Cork.</i>   |
| 1824. Feb. 28     | *Hudson, Henry, M.D., F.K. & Q.C.P.I. <i>Glenville, Fermoy.</i>   |
| 1875. June 14     | †Hume, Rev. Abraham, (Canon), D.C.L., LL.D. (Hon.); F.S.A.; F.R.S.N.A. (Copenhagen); Corr. F.S.A. Scot.; Hon. F.S.A. Newcastle; Member of the Philological and Eng. Dialect Societies; Ex-President Historic Soc. of Lanc. and Cheshire. <i>All Souls' Vicarage, Liverpool.</i> |
| 1866. June 11     | Hutton, Thomas Maxwell, J.P. 118, <i>Summerhill, Dublin.</i>  |
| 1847. Jan. 11     | *Ingram, John Kells, LL.D., F.T.C.D., Librarian of Trinity College, Dublin, & Vice-President of the Academy. 2, <i>Wellington-road, Dublin.</i>   |
| 1879. April 14    | †Ingram, Thomas Dunbar, LL.B. 13, <i>Wellington-road, Dublin.</i>   |
| 1841. April 12    | *Jellet, Rev. John Hewitt, B.D., S.F.T.C.D., F.R.G.S.I. 64, <i>Lower Leeson-street, Dublin.</i>   |
| 1842. June 18     | *Jennings, Francis M., F.G.S., F.R.G.S.I. <i>Brown-street, Cork.</i>  |
| 1867. April 8     | Jephson, Robert H., Esq. 80, <i>Lansdowne-road, Dublin.</i>   |
| 1863. Jan. 12     | Joyce, Patrick Weston, LL.D. <i>Lyre na Grena, Leinster-road, Rathmines.</i>  |
| 1870. Dec. 12     | *†Joyce, Robert D., M.D. 21, <i>Bowdoin-street, Boston, Mass., U.S., America.</i>   |
| 1878. May 13      | *Kane, John F., Esq. <i>Leeson-park House, Dublin.</i>  |
| 1831. Nov. 30     | *§Kane, Sir Robert, M.D., LL.D., F.K. & Q.C.P.L., F.R.S., F.R.G.S.I., F.C.S., Royal Medallist R.S., 1841, PRESIDENT of the Academy. <i>Fortlands, Killiney, Co. Dublin.</i>   |
| 1873. Dec. 8      | *Kane, Robert Romney, M.A. 76, <i>Harcourt-street, Dublin.</i>  |
| 1865. April 10    | Kane, William Francis De Vismes, M.A., J.P. <i>Sloperton Lodge, Kingstown; Drumreask House, Monaghan.</i>   |
| 1870. June 13     | *Keane, John P., C.E., Engineer, Public Works Department, Bengal. <i>Calcutta.</i>  |
| 1867. Feb. 11     | Keane, Marcus, J.P. <i>Beech Park, Ennis.</i>   |
| 1864. Nov. 14     | *Keenan, Patrick J., C.B., Resident Commissioner, Board of National Education, Ireland. <i>Delville, Glasnevin, Co. Dublin.</i>   |

| Date of Election. |  |
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| 1876. May 8       | Kelly, James Edward, M.D. 13, <i>Rutland-square, East, Dublin.</i>   |
| 1870. May 23      | *Kelly, John, L.M. (Dub.). <i>University College Hospital, Calcutta.</i>   |
| 1846. April 13    | *Kennedy, James Birch, J.P. <i>Cara, by Killarney.</i>   |
| 1874. May 11      | †Kidd, Abraham, M.D. <i>Ballymena.</i>   |
| 1876. Feb. 14     | *†Kildare, Most Noble Gerald, Marquess of. <i>Carton, Maynooth.</i>  |
| 1875. June 14     | †Kilgarrieff, Malachy J., F.R.C.S.I. 30, <i>Harcourt-street, Dublin.</i>   |
| 1866. April 9     | *Kinahan, Edward Hudson, J.P. 11, <i>Merrion-square, North, Dublin.</i>  |
| 1868. Jan. 13     | Kinahan, George Henry, F.R.G.S.I., Geological Survey of Ireland. <i>Ovoca, Co. Wicklow; 14, Hume-street, Dublin.</i>   |
| 1863. April 13    | Kinahan, Thomas W., B.A. 24, <i>Waterloo-road, Dublin.</i>   |
| 1845. June 8      | *King, Charles Croker, M.D., F.R.C.S.I., Medical Commissioner, Local Government Board. 34, <i>Upper Fitzwilliam-street, Dublin.</i>                                  |
| 1837. Feb. 13     | *§Knox, George J., Esq.  |
| 1864. April 11    | *Lalor, John J., F.R.G.S.I. <i>City Hall, Cork-hill, Dublin.</i>   |
| 1875. May 10      | †Lane, Alexander, M.D. <i>Ballymoney.</i>  |
| 1864. Jan. 11     | LaTouche, J. J. Digges, M.A. 1, <i>Ely-place, Upper, Dublin.</i>   |
| 1836. Jan. 25     | *LaTouche, William Digges, M.A., D.L. 34, <i>Stephen's-green, North, Dublin.</i>   |
| 1857. May 11      | *Lawson, Right Hon. James A., LL.D., Justice of the Court of Common Pleas. 27, <i>Upper Fitzwilliam-street, Dublin.</i>  |
| 1857. April 13    | *Leach, Lieut.-Colonel George A., R.E. 3, <i>St. James's-square, London, S.W.</i>  |
| 1845. Feb. 10     | *LeFanu, William R., C.E. <i>Summerhill, Enniskerry, Co. Wicklow.</i>  |
| 1846. May 11      | *Lefroy, George, Esq. ( <i>Abroad.</i> )   |
| 1844. April 8     | *†Leinster, His Grace Charles-William, Duke of, Chancellor of the Queen's University in Ireland, and President of the Royal Dublin Society. <i>Carton, Maynooth.</i> |
| 1869. April 12    | *Lenihan, Maurice, J.P. <i>Limerick.</i>   |
| 1853. April 11    | Lentaigne, Sir John, C.B., M.B., J.P., F.R.G.S.I. 1, <i>Great Denmark-street, Dublin.</i>  |
| 1870. June 13     | Leonard, Hugh, F.G.S., F.R.G.S.I., Geological Survey of Ireland. <i>The Seasons, Ballymore-Eustace; 14 Hume-street, Dublin.</i>                                      |

| Date of Election. |  |
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| 1868. April 27    | *Little, James, M.D., L.R.C.S.I., F.K. & Q.C.P.I.<br>14, <i>Stephen's-green, North, Dublin.</i>  |
| 1832. Feb. 27     | *§Lloyd, Rev. Humphrey, D.D., D.C.L. (Oxon.), F.R.SS.<br>Lond. and Edin., V.P.R.G.S.I., V.P.R.D.S.,<br>Member of the German Order "For Merit," Provost<br>of Trinity College, Dublin. <i>Provost's House,<br/>Dublin; Victoria Castle, Killiney, Co. Dublin.</i> |
| 1876. Jan. 10     | Lloyd, Joseph Henry, M.A., Ph. D., F.R.S.I.,<br>F.S.A., M. Phil. Soc. 7, <i>Lower Gardiner-street,<br/>Dublin.</i>   |
| 1846. Jan. 12     | *Lloyd, William T., M.D.   |
| 1875. April 12    | Lombard, James F., J.P. <i>South-hill, Rathmines, Co.<br/>Dublin.</i>  |
| 1838. Feb. 12     | *Longfield, Right Hon. Mountfort, LL.D. (late Judge<br>in the Landed Estates' Court). 47, <i>Fitzwilliam-<br/>square, West, Dublin.</i>  |
| 1878. Feb. 11     | *†Lowry, Robert William, B.A. (Oxon.) D.L., J.P.<br><i>Pomeroy House, Dungannon, Co. Tyrone.</i>   |
| 1868. Jan. 13     | Lyne, Robert Edwin, Esq. 2, <i>Hargrave-terrace,<br/>Terenure-road, Rathgar, Co. Dublin.</i>   |
| 1851. May 12      | *Lyons, Robert D., M.B., F.K. & Q.C.P.I., M.P.,<br>Prof. of Medicine, C.U.I. 8, <i>Merrion-square,<br/>West, Dublin.</i>   |
| 1873. April 14    | §Macalister, Alexander, M.D., L.R.C.S.I., L.K. &<br>Q.C.P.I., F.R.G.S.I., Professor of Anatomy and<br>Comparative Anatomy in the University of Dub-<br>lin, Secretary of the Academy. 11, <i>Upper Fitz-<br/>william-street, Dublin.</i>                         |
| 1871. Feb. 13     | *Macartney, J. W. Ellison, M.P., J.P. <i>The Palace,<br/>Clogher.</i>  |
| 1857. April 13    | Mac Carthy, Denis Florence, Esq. 21, <i>Notting-<br/>hill Terrace, London, W.</i>  |
| 1853. April 11    | *McCarthy, James Joseph, R.H.A. <i>Charleston House,<br/>Rathmines, Co. Dublin.</i>  |
| 1875. Jan. 11     | †Mac Carthy, John G., Esq. <i>River View, Montenotte,<br/>Cork.</i>  |
| 1874. Feb. 9      | McClure, Rev. Edmund, M.A. <i>Society for Pro-<br/>moting Christian Knowledge, Northumberland-<br/>avenue, Charing Cross, London, S.W.</i>   |
| 1873. Jan. 13     | *McCready, Rev. Christopher, M.A. 56, <i>High-street,<br/>Dublin.</i>  |
| 1864. April 11    | *McDonnell, Alexander, M.A., C.E., F.R.G.S.I. &<br><i>John's, Island-bridge, Co. Dublin.</i>   |
| 1845. Feb. 24     | *Macdonnell, James S., C.E.  |
| 1827. Mar. 16     | *MacDonnell, John, M.D., F.R.C.S.I., F.R.G.S.I.<br>32, <i>Upper Fitzwilliam-street, Dublin.</i>  |

## Date of Election.

1857. Feb. 9 \*§ McDonnell, Robert, M.D., F.R.C.S.I., F.R.S. 14, *Lower Pembroke-street, Dublin.*
1865. April 10 †Mac Donnell, Lieut.-Col. William Edward Armstrong, Vice-Lieutenant of the County Clare. *New Hall, near Ennis.*
1856. June 9 \*†Mac Ivor, Rev. James, D.D., F.R.G.S.I. *Moyle, Newtownstewart.*
1876. April 10 MacIlwaine, Rev. William, D.D. *Uster Villas, Belfast.*
1871. April 10 Macnaghten, Colonel Sir Francis Edmund, Bart. (Late 8th Hussars), D.L., *Dundarave, Bushmills, Co. Antrim.*
1874. April 13 MacSwiney, Stephen Myles, M.D. 38, *York-street, Dublin.*
1846. Feb. 23 \*Madden, Richard R., F.R.C.S. Eng. 1, *Vernon-terrace, Booterstown-avenue, Booterstown, Co. Dublin.*
1864. June 13 Madden, Thomas More, M.D., L.K.Q.C.P.I., M.R.C.S.E., Examiner in Midwifery, etc., Q.U.I. 33, *Merrion-square, South, Dublin.*
1860. May 10 †Mahony, William A., M.D. *Northallerton, York, England.*
1874. Feb. 9 §Malet, John Christian, M.A. *Trinity College, Dublin.*
1832. Oct. 22 \*§Mallet, Robert, M.A., M. Eng., Ph. D., F.R.S., M.I.C.E., F.G.S., F.R.G.S.I. 16, *The Grove, Clapham-road, London, S.*
1865. April 10 \*Malone, Rev. Silvester, P.P., F.R.H.A.A.I. *Six-milebridge.*
1859. Jan. 10 \*†Manchester, His Grace William-Drogo, Duke of 1, *Great Stanhope-street, London; Kimbolton Castle, St. Neot's, Hunts; The Castle, Tanderagee.*
1828. Mar. 15 \*Martin, Ven. John Charles, D.D., Archdeacon of Kilmore. *Killeshandra.*
1871. Jan. 9 Maunsell, George Woods, M.A., D.L., V.P. R.D.S. 10, *Merrion-square, South, Dublin.*
1879. Feb. 10 Meldon, Austin, M.D. 15, *Merrion-square, North, Dublin.*
1861. Jan. 14 †Monck, Right Hon. Charles-Stanley, Viscount, G.C.M.G., Lieutenant of Dublin City and County. *Charleville, Bray, Co. Wicklow.*
1858. Jan. 11 \*Montgomery, Howard B., M.D.
1860. Jan. 9 Moore, Alexander G. Montgomery, Lieut.-Colonel, 4th Hussars. *India.*
1861. Jan. 14 Moore, James, M.D., M.R.C.S.E. 7, *Chichester-street, Belfast.*
1869. Feb. 8 \*Moran, Most Rev. Patrick F., D.D., Bishop of Ossory. *St. Kyran's College, Kilkenny.*

## Date of Election.

1866. April 9 | More, Alexander Goodman, F.L.S. 8, *Botanic View, Glanevin, Co. Dublin.*
1874. Feb. 9 | § Moss, Richard J., F.C.S., Keeper of the Minerals, Museum of Science and Art. 66, *Kenilworth-square, Rathgar.*
1876. April 10 | † Myers, Walter, Esq. 2, *Richard-street, Spencer-street, Birmingham.*
- 1840 Feb. 10 | \*Napier, Right Hon. Sir Joseph, Bart., D.C.L., LL.D., Vice-Chancellor of Dublin University. 4, *Merrion-square, South, Dublin.*
1844. June 8 | \*Neville, John, C.E., F.R.G.S.I. *Roden-place, Dundalk.*
1854. May 8 | Neville, Parke, C.E. 58, *Pembroke-road, Dublin.*
1873. Jan. 13 | Nolan, Joseph, F.R.G.S.I., Geological Survey of Ireland. 47, *Great James's-street, Derry*; 14, *Hume-street, Dublin.*
1846. Jan. 12 | \*† Nugent, Arthur R., Esq. (*Portaferry, Co. Down.*)
1869. June 14 | \*O'Brien, James H., Esq., *St. Lorcan's, Howth, Co. Dublin.*
1875. Jan. 11 | O'Callaghan, J. J., F.R.I.A.I. 31 *Harcourt-street, Dublin.*
1867. June 10 | O'Connor Don, The, D.L. *Clonalia, Castlereagh, Co. Roscommon.*
1867. Jan. 14 | O'Donel, Charles J., J.P. 47, *Lower Leeson-street, Dublin.*
1865. Apr. 10 | O'Donnavan, William J., LL.D. *University Club, 17, Stephen's-green, North, Dublin*; 79, *Kenilworth-square, Rathgar, Co. Dublin.*
1869. Apr. 12 | † O'Ferrall, Ambrose More, Esq. *Balyna House, Enfield, Co. Kildare.*
1866. June 8 | \*O'Grady, Edward S., B.A., M.B., M.Ch., F.R.C.S.I. 105, *Stephen's-green, South, Dublin.*
1867. May 13 | † O'Grady, Standish H., C.E. *Erinagh House, Castleconnell.*
1866. June 25 | O'Hagan, John, M.A., Q.C. 22, *Upper Fitzwilliam-street, Dublin.*
1857. June 8 | O'Hagan, Right Hon. Thomas, Baron, Lord High Chancellor of Ireland. 34, *Rutland-square, West, Dublin.*
1869. Apr. 12 | O'Hanlon, Rev. John, P.P. *Sandymount, Co. Dublin.*
1878. Feb. 11 | O'Hanlon, Michael, L.K. & Q.C.P.I. *Castlecomer, Co. Kilkenny.*

| Date of Election. |  |   |
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| 1866. Jan. 8      |  | O'Kelly, Joseph, M.A., F.R.G.S.I., Geological Survey of Ireland. 7, <i>Warwick-terrace, Leeson Park, Dublin</i> ; 14, <i>Hume-street, Dublin</i> .  |
| 1869. Apr. 12     |  | O'Lavery, Rev. James, P.P. <i>Holywood, near Belfast</i> .  |
| 1876. Feb. 14     |  | Olden, Rev. Thomas, B.A. <i>Ballyclough, Mallow, Co. Cork</i> .   |
| 1871. Apr. 10     |  | O'Looney, Brian, F.R.H.S., Professor of Irish Language, Literature, and Archæology to the Catholic University of Ireland, 85, <i>Stephen's-green, South. Grove-villa House, Crumlin, Co. Dublin</i> . |
| 1861. June 10     |  | *O'Mahony, Rev. Thaddeus, D.D. <i>Trinity College, Dublin</i> .   |
| 1870. Jan. 10     |  | §O'Reilly, Joseph P., C.E., Prof. of Mining and Mineralogy, Royal College of Science, Dublin, Secretary of Foreign Correspondence of the Academy. 58, <i>Park-avenue, Sandymount, Co. Dublin</i> .    |
| 1878. May 13      |  | O'Reilly, Rev. John, C.C. 13, <i>North Richmond-street, Dublin</i> .  |
| 1879. May 12      |  | †O'Rorke, Rev. Terence, D.D., P.P. <i>Collooney, Sligo</i> .  |
| 1866. June 11     |  | O'Rourke, Very Rev. (Canon) John, P.P. <i>St. Mary's, Maynooth</i> .  |
| 1838. Dec. 10     |  | *Orpen, John Herbert, LL.D. 58, <i>Stephen's-green, East, Dublin</i> .  |
| 1870. Feb. 14     |  | O'Shaughnessy, Mark S., Esq., Regius Prof. of English Law, Queen's College, Cork, and one of the Examiners, Q.U.I. 19, <i>Gardiner's-place, Dublin</i> .  |
| 1866. Jan. 8      |  | O'Sullivan, Daniel, Ph. D. 9, <i>Eden-park, Sandycove, Kingstown, Co. Dublin</i> .  |
| 1839. June 10     |  | *Parker, Alexander, J.P. 46, <i>Upper Rathmines, Co. Dublin</i> .   |
| 1873. Feb. 10.    |  | Patterson, William Hugh, Esq., <i>Garranard, Strandtown, Belfast</i> .  |
| 1847. Feb. 8      |  | *†Pereira [elected as Tibbs], Rev. Henry Wall, M.A., F.S.A. Scot., &c. <i>Donnington Lodge, Ifley, Oxford</i> .   |
| 1872. Apr. 8      |  | Phayre, Major-General Sir Arthur Purves, K.C.S.I., G.C.M.G., C.B. <i>Bray, Co. Wicklow</i> .  |
| 1841. Apr. 12     |  | *Phibbs, William, Esq. <i>Seafeld, Sligo</i> .  |
| 1863. Apr. 13     |  | Pigot, David R., M.A., Master, Court of Exchequer. 12, <i>Leeson-park, Dublin</i> .   |
| 1870. Apr. 11     |  | Pigot, Thomas F., C.E., Prof. of Descriptive Geometry, etc., Royal College of Science, Dublin. 4, <i>Wellington-road, Dublin</i> .  |
| 1838. Feb. 12     |  | *Pim, George, J.P. <i>Brennanstown, Cabinteely, Co. Dublin</i> .  |



| Date of Election. |  |   |
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| 1849. Jan. 8      |  | *Pim, Jonathan, Esq. <i>Greenbank, Monkstown, Co. Dublin.</i>   |
| 1880. Feb. 9      |  | Plunkett, Thomas, F.R.G.S.I. <i>Enniskillen.</i>  |
| 1864. Jan. 11     |  | *†Poore, Major Robert, (Late 8th Hussars). ( <i>Abroad.</i> )   |
| 1862. Apr. 14     |  | *Porte, George, Esq. 43, <i>Great Brunswick-st., Dublin.</i>  |
| 1873. Jan. 13     |  | *Porter, Alexander, M.D., F.R.C.S., Assist.-Surgeon, Indian Army. <i>Madras.</i>  |
| 1875. Jan. 11     |  | †Porter, George Hornidge, M.D., Surgeon in Ordinary to the Queen in Ireland, M. Ch. 3, <i>Merrion-square, North, Dublin.</i>  |
| 1852. Apr. 12     |  | *Porter, Henry J. Ker, Esq. <i>Hanover-square Club, London, W.</i>  |
| 1873. Jan. 13     |  | Powell, George Denniston, M.D., L.R.C.S.I. 76, <i>Upper Leeson-street, Dublin.</i>  |
| 1864. June 13     |  | †Power, Sir Alfred, K.C.B., M.A. 35, <i>Raglan-road, Dublin.</i>  |
| 1875. April 12    |  | *†Powerscourt, Right Hon. Mervyn Wingfield, Viscount. <i>Powerscourt, Enniskerry, Bray.</i>   |
| 1854. June 9      |  | Pratt, James Butler, C.E. <i>Drumsna, Co. Leitrim.</i>  |
| 1874. Dec. 14     |  | *†Purcell, Mathew John, Esq. ( <i>Burton, Co. Cork.</i> )   |
| 1858. Jan. 11     |  | Purser, John, jun., M.A., Professor of Mathematics. <i>Queen's College, Belfast.</i>  |
| 1867. Jan. 14     |  | *†Read, John M., General, U.S.; Consul-General of the U.S.A. for France and Algeria, Member of American Philos. Soc., Fellow of the Royal Soc. of Northern Antiquaries, &c. <i>Athens.</i>  |
| 1846. Dec. 14     |  | *§Reeves, Very Rev. William, D.D., M.B., LL.D., Dean of Armagh. <i>The Public Library, Armagh; Rectory, Tynan.</i>  |
| 1843. Feb. 13     |  | *§Renny, Henry L., F.R.G.S.I., Lieut. R.E., (Retired List). [ <i>Quebec?</i> ]  |
| 1878. June 24     |  | *Reynell, Rev. William A., B.D. 8, <i>Henrietta-street, Dublin.</i>   |
| 1875. Jan. 11     |  | Reynolds, James Emerson, M.D., F.R.S., Professor of Chemistry in the University of Dublin. 62, <i>Morehampton-road, Dublin.</i>   |
| 1867. Apr. 8      |  | Richey, Alexander George, LL.D., Q.C., a Vice-President of the Academy. 27, <i>Upper Pembroke-street, Dublin.</i>   |
| 1875. June 14     |  | Robertson, John C., L.K.Q.C.P.I., M.R.C.S.L., F.R.A.S. <i>The Asylum, Monaghan.</i>   |
| 1816. Feb. 14     |  | *§Robinson, Rev. Thomas Romney, D.D., F.R.S., F.R.A.S., Hon. M.I.C.E. Lon., Hon. M.I.C.E.I., Hon. M. Cambridge Phil. Soc., Hon. M. Acad. Palermo, Hon. M. Acad. Philadelphia, Hon. F.R.G.S.I., Royal Medallist, R.S., 1862, Director of Armagh Observatory. <i>Observatory, Armagh.</i> |

| Date of Election. |   |
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| 1844. June 10     | *Roe, Henry, M.A. ( <i>Isle of Man.</i> )   |
| 1876. Jan. 10     | *†Ross, Rev. William. <i>Chapel Hill House, Rothesay.</i>   |
| 1870. Nov. 30     | Rosse, Rt. Hon. Lawrence, Earl of, D.C.L., D.L.,<br>F.R.S., F.R.A.S. <i>Birr Castle, Parsonstown.</i>   |
| 1872. Apr. 8      | Rowley, Standish G., LL.D., J.P., M.R.S.L. <i>Sylvan-<br/>park, Kells, Co. Meath.</i>   |
| 1843. Jan. 9      | *§Salmon, Rev. George, D.D., D.C.L. (Oxon.), LL.D.<br>(Cantab.), F.R.S., and Royal Medallist, 1868,<br>Regius Professor of Divinity in the University of<br>Dublin. 81, <i>Wellington-road, Dublin.</i> |
| 1853. Jan. 10     | *Sanders, Gilbert, Esq. <i>Albany Grove, Monkstown,<br/>County Dublin.</i>  |
| 1851. May 12      | *Sayers, Rev. Johnston Bridges, LL.D. <i>Velore, Madras.</i>  |
| 1846. Feb. 9      | *†Sherrard, James Corry, Esq. 7, <i>Oxford-square,<br/>Hyde-park, London.</i>   |
| 1873. Jan. 13     | *†Shirley, Evelyn Philip, M.A., D.L., F.S.A. <i>Lough<br/>Fea, Carrickmacross; Ettington Park, Stratford-<br/>on-Avon.</i>  |
| 1869. Apr. 12     | Sigerson, George, M.D., M.Ch., F.L.S., Prof. of<br>Botany, C.U.I. 3, <i>Clare-street, Dublin.</i>   |
| 1885. Feb. 23     | *§Smith, Aquilla, M.D., F.K. & Q.C.P.I., King's<br>Prof. of Materia Medica and Pharmacy, Dub. Univ.<br>121, <i>Lower Baggot-street, Dublin.</i>   |
| 1877. Dec. 10     | *†Smith, Charles, Esq. <i>Barrow-in-Furness.</i>  |
| 1868. Jan. 13     | †Smith, John Chaloner, C.E. <i>Engineer's Office, Dublin,<br/>Wicklow and Wexford Railway, Bray.</i>  |
| 1833. Apr. 22     | *Smith, Joseph Huband, M.A.   |
| 1876. June 26     | Smith, Rev. Richard Travers, (Canon) B.D. <i>The<br/>Vicarage, Clyde-road, Dublin.</i>  |
| 1873. Jan. 13     | Smyth, Patrick James, M.P., Chev. L. H. 15,<br><i>Belgrave-square, East, Rathmines, Co. Dublin.</i>   |
| 1867. Jan. 14     | Smythe, William Barlow, M.A., D.L. <i>Barbavilla<br/>House, Collinstown, Killucan.</i>  |
| 1873. April 14    | *Smythe, William James, Lieutenant-General, R.A.,<br>F.R.S. <i>White Abbey, Belfast.</i>  |
| 1874. Dec. 14     | Stewart, James, M.A. (Cantab.), Professor of Greek<br>and Latin, C.U.I. 21, <i>Gardiner's-place, Dublin.</i>  |
| 1871. June 12     | §Stokes, Hon. Whitley, LL.D., C.S.I., Member of<br>the Supreme Council of India. <i>Legislative Council<br/>House, Calcutta.</i>  |
| 1874. June 22     | Stokes, William, M.D., M. Ch. 5, <i>Merrion-square,<br/>North, Dublin.</i>  |
| 1857. June 8      | *§Stoney, Bindon B., M.A., C.E., F.R.G.S.I. 42,<br><i>Wellington-road, Dublin.</i>  |
| 1856. Apr. 14     | §Stoney, George Johnstone, M.A., D.Sc., F.R.S.,<br>Secretary to the Queen's University in Ireland.<br>3, <i>Palmerston-park, Upper Rathmines.</i>   |

| Date of Election. |  |
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| 1857. Aug. 24     | *Sullivan, William Kirby, Ph.D., President of Queen's College, Cork. <i>Queen's College, Cork.</i>   |
| 1874 Apr. 13      | †Sweetman, H. S., Esq. 38, <i>Alexandra-road, St. John's Wood, London, N.W.</i>  |
| 1845. Feb. 24     | *Sweetman, Walter, J.P. 4, <i>Mountjoy-square, North, Dublin.</i>  |
| 1871. Jan. 9      | †Symons, John, Esq. 72, <i>Queen-street, Hull.</i>   |
| 1845. June 23     | *Talbot de Malahide, Right Hon. James, Baron, D.C.L., D.L., F.R.S., F.S.A., F.G.S., F.R.G.S.I., F.R. Hist. Soc., Pres. Archæol. Inst. <i>The Castle, Malahide, Co. Dublin.</i> |
| 1877. April 9     | §Tarleton, Francis Alexander, LL.D., F.T.C.D. 24, <i>Leeson-street, Upper, Dublin.</i>   |
| 1848. Feb. 14     | *†Tarrant, Charles, C.E. <i>Waterford.</i>   |
| 1869. Apr. 12     | §Tichborne, Charles Roger C., F.C.S. 23, <i>Gardiner-street, Middle, Dublin; Apothecaries' Hall, 40, Mary-street, Dublin.</i>  |
| 1869. June 14     | Tobin, Sir Thomas, F.S.A., F.R.S. of Northern Antiq., Copenhagen, D.L. <i>Ballincollig, Cork.</i>  |
| 1864. Mar. 16     | Trench, Right Hon. and Most Rev. Richard-Chenevix, D.D., Lord Archbishop of Dublin, Primate of Ireland. <i>The Palace, Stephen's-green, North, Dublin.</i>                     |
| 1879. June 9      | *†Tucker, Stephen Isaacson, Esq., Somerset Herald, <i>Heralds' College, London, E.C.</i>   |
| 1846. Feb. 9      | *Tuffnell, Thomas Joliffe, F.R.C.S.I., M.R.C.S.E. 58, <i>Lower Mount-street, Dublin.</i>   |
| 1871. June 12     | †Tyrrell, Colonel Frederick, J.P. <i>Gold Coast Colony, Acera, care of Forbes &amp; Co., 25, Cockspur-street, London, S.W.</i>   |
| 1876. April 10    | *†Tyrrell, George Gerald, Esq., Clerk of the Crown, Co. Armagh. <i>Banville, Banbridge, Co. Down.</i>  |
| 1834. May 26      | *Vandeleur, Colonel Crofton M., D.L. <i>Kilrush House, Kilrush.</i>  |
| 1870 Nov. 30      | †Ventry, Right Hon. Dayrolles-Blakeney, Baron, D.L. <i>Burnham-house, Dingle, Co. Kerry.</i>   |
| 1880. Feb. 9      | †Vesey, Agmondisham B., L.K.Q.C.P.I. <i>Bellevue, Magherafelt.</i>   |
| 1864. Feb. 8      | *†Warren, James W., M.A. 39 <i>Rutland-square, West, Dublin.</i>   |
| 1873. June 23     | Warren, William H., M.D., L.R.C.S.I., L.K. & Q. C. P. I. 37, <i>Westland-row, Dublin; P. and O. Steam Nav. Co., Southampton.</i>   |

| Date of Election. |  |  |
|-------------------|--|--|
| 1866. Apr. 9      |  | Westropp, W. H. Stacpoole, L.R.C.S.I., F.R.G.S.I., &c. <i>Lisdoonvarna, Co. Clare.</i>   |
| 1876. Nov. 13     |  | † White, Rev. Hill Wilson, LL.D., <i>Wilson's Hospital, Multifarnham, Co. Westmeath.</i>   |
| 1880. Feb. 9      |  | † White, John Newsom, Esq. <i>Selborne, Waterford.</i>   |
| 1857. June 8      |  | *† Whitehead, James, M.D., F.R.C.S.E., M.R.C. Phys., Lon. 87, <i>Mosley-street, Manchester.</i>  |
| 1851. Jan. 18     |  | *† Whittle, Ewing, M.D., M.R.C.S.E. 1, <i>Parliament-terrace, Liverpool.</i>   |
| 1874. June 8      |  | Wigham, John R., Esq. 35, <i>Capel-street, Dublin.</i>   |
| 1873. April 14    |  | Wilkinson, Thomas, Esq. <i>Enniscorthy, Co. Wexford.</i>   |
| 1839. Jan. 14     |  | * Williams, Richard Palmer, F.R.G.S.I. 38, <i>Dame-street, Dublin.</i>   |
| 1837. Jan. 9      |  | * Williams, Thomas, Esq. 38, <i>Dame-street, Dublin.</i>   |
| 1877. April 9     |  | Williamson, Benjamin, M.A., F.R.S., F.T.C.D. 11, <i>Northbrook-road, Dublin.</i>   |
| 1855. Nov. 12     |  | * Wright, Edward, LL.D. <i>The Cedars, Ealing, London, W.</i>  |
| 1857. Aug. 24     |  | *§ Wright, Edward Perceval, M.A., M.D., F.L.S., F.R.C.S.I., J.P., Professor of Botany and Keeper of the Herbarium, Dublin University. 5, <i>Trinity College, Dublin.</i> |

## HONORARY MEMBERS.

Date of Election.

1863. June 22 | HIS ROYAL HIGHNESS ALBERT-EDWARD, PRINCE OF WALES.

*"The PRESIDENT OF THE ROYAL SOCIETY, AND EX-PRESIDENTS of the same, are always considered Honorary Members of the Academy."*—By-Laws, ii., 14.

1869. Mar. 16 | Hooker, Sir Joseph Dalton, M.D., K.C.B., F.R.S.,  
(Elected Hon. Mem. in Sec. of Science originally.) D.C.L., LL.D., V-P.L.S., F.G.S., Director of the Royal Gardens, Kew, EX-PRESIDENT OF THE ROYAL SOCIETY. *Kew, London, W.*

1863. Mar. 16 | Sabine, General Sir Edward, R.A., K.C.B., D.C.L., LL.D., V-P. and EX-PRESIDENT OF THE ROYAL SOCIETY, Hon. F.R.S., Edin., F.R.A.S., F.L.S., &c. 13, *Ashley-place, Westminster, London, S.W.*

1882. Nov. 30 | Airy, Sir George Biddell, K.C.B., D.C.L., LL.D.,  
(Elected Hon. Mem. in Sec. of Science originally.) EX-PRESIDENT OF THE ROYAL SOCIETY (1871), Astronomer Royal, V-P. R.A.S., &c. *The Royal Observatory, Greenwich, London, S.E.*

1880. Mar. 16 | Spottiswoode, William, M.A., D.C.L., LL.D., PRESIDENT OF THE ROYAL SOCIETY. 41, *Grosvenor-place, London, S.W.*

## SECTION OF SCIENCE.

[Limited to 30 Members, of whom one-half at least must be foreigners.]

1873. Mar. 15 | Adams, John Couch, LL.D. (Dub.), F.R.S. and Copley Medalist, V-P.R.A.S., F.C.P.S., etc., Director of the Observatory and Lowndsean Professor of Astronomy and Geometry in the University of Cambridge. *Observatory, Cambridge.*

1874. Mar. 16 | Berthelot, Professor Marcelin Pierre Eugène. *Boulevard Saint-Michel, 57, Paris.*

1875. Mar. 16 | Bertrand, Professor Joseph Louis Francois. *Paris.*

1869. Mar. 16 | Brown-Séquard, Charles Edouard, M.D., F.R.C.P., F.R.S. *Collège de France, Rue Gay Lussac, Paris.*

1869. Mar. 16 | Bunsen, Professor Robert Wilhelm Eberard. *Heidelberg.*

1869. Mar. 16 | Carus, J. Victor, Professor of Comparative Anatomy. *Leipzig.*

1873. Mar. 15 | Cayley, Arthur, LL.D. (Dub.), F.R.S., V-P. R.A.S., &c., Sadlerian Professor of Mathematics in the University of Cambridge. *Cambridge.*

HONORARY MEMBERS—*Continued.*

SECTION OF SCIENCE—*Continued.*

| Date of Election. |  |
|-------------------|--|
| 1866. Mar. 16     | Charles, Professor Michel. <i>Rue du Bac, 62, Paris.</i>   |
| 1866. Mar. 16     | Clausius, Prof. Rudolf Julius Emmanuel. <i>Zürich.</i>   |
| 1873. Mar. 15     | Dana, James Dwight, LL.D., &c., Professor of Geology and Mineralogy. <i>Yale College, New Haven, Conn., U. S. America.</i>   |
| 1866. Mar. 16     | Darwin, Charles, F.R.S., &c. <i>Down, Beckenham, Kent.</i>   |
| 1869. Mar. 16     | Daubrée, Prof. Gabriel Auguste. <i>Ecole des Mines, Paris.</i>   |
| 1876. Mar. 16     | Decandolle, Alphonse, Professor of Botany. <i>Geneva.</i>  |
| 1841. Mar. 16     | Dumas, Professor Jean Baptiste, G.C.L.H. <i>Rue St. Dominique, 69, Paris.</i>  |
| 1875. Mar. 16     | Gray, Asa, Professor of Botany, Harvard University. <i>Cambridge, Massachusetts, U. S. America.</i>  |
| 1876. Mar. 16     | Haeckel, Ernst, Professor of Zoology. <i>Jena.</i>   |
| 1880. Mar. 16     | Heer, Oswald, Prof. of Botany in Univ. <i>Zürich.</i>  |
| 1864. Mar. 16     | Helmholtz, Professor Hermann Ludwig Ferdinand. <i>Berlin.</i>  |
| 1878. Mar. 15     | Hofmann, August Wilhelm, F.R.S., Professor of Chemistry in the University. <i>Berlin.</i>  |
| 1879. Mar. 16     | Huggins, William, D.C.L., LL.D., F.R.S. <i>Upper Tulse-hill, London, S.W.</i>  |
| 1874. Mar. 16     | §Huxley, Professor Thomas Henry, LL.D., Fellow and Secretary of the Royal Society. <i>London.</i>  |
| 1864. Mar. 16     | Hyrtl, Professor Karl Joseph. <i>Vienna.</i>   |
| 1880. Mar. 16     | Loomis, Professor Elias. <i>Yale College, U.S. America.</i>  |
| 1880. Mar. 16     | Marsh, Prof. O. C. <i>Yale College, Conn., U.S. America.</i>   |
| 1878. Mar. 16     | Pasteur, Louis. <i>Paris.</i>  |
| 1873. Mar. 15     | Schimper, Wilhelm Philipp, Professor of Geology in the University. <i>Strasburg.</i>   |
| 1873. Mar. 15     | Stokes, George Gabriel, D.C.L., LL.D. (Dub.), Fellow and Secretary of the R.S., F.C.P.S., F.R.S.Ed., &c., Lucasian Professor of Mathematics in the University of Cambridge. <i>Lensfield Cottage, Cambridge.</i> |
| 1878. Mar. 16     | Thomson, Professor Sir William, LL.D., D.C.L., F.R.S. <i>Glasgow.</i>  |
| 1867. Mar. 16     | Würtz, Professor Adolf Karl. <i>Rue St. Guillaume, 27, Paris.</i>  |

(One vacancy.)

**SECTION OF POLITE LITERATURE & ANTIQUITIES.**

[Limited to 30 Members, of whom one-half at least must be foreigners.]

*Elected in the Department of Polite Literature.**Date of Election.*

|               |   |
|---------------|---|
| 1869. Mar. 16 | Gayangos y Arce, Don Pascual de. <i>London.</i> |
| 1869. Mar. 16 | Lassen, Professor Christian. <i>Bonn.</i>       |
| 1849. Nov. 30 | Lepsius, Professor Karl Richard. <i>Berlin.</i> |
| 1869. Mar. 16 | Mommsen, Professor Theodor. <i>Berlin.</i>      |
| 1863. Mar. 16 | Müller, Professor Max. <i>Oxford.</i>           |

*Elected in the Department of Antiquities.*

|               |  |
|---------------|--|
| 1869. Mar. 16 | Benavides, Don Antonio. <i>Madrid.</i>   |
| 1848. Nov. 30 | Botta, Paul Emile. <i>Paris.</i>   |
| 1867. Mar. 16 | De Rossi, Commendatore Giovanni Battista. <i>Rome.</i>   |
| 1841. Mar. 16 | Halliwell-Phillipps, James Orchard, Esq., F.R.S.,<br>F.S.S.A. Lond. and Scotland, &c. <i>Hollingbury<br/>Cope, Brighton.</i> |
| 1863. Mar. 16 | Keller, Ferdinand. <i>Zürich.</i>  |
| 1854. Mar. 16 | Maury, Professor Louis Ferdinand Alfred. <i>Paris.</i>   |
| 1866. Mar. 16 | Nilsson, Professor Sven. <i>Lund.</i>  |
| 1867. Mar. 16 | Visconti, Barone Commendatore P. E. <i>Rome.</i>   |
| 1867. Mar. 16 | Worsaae, Prof. Hans Jakob Asmussen. <i>Copenhagen.</i>   |

*Elected since the union of the two classes of Honorary Members  
in this Section.*

|               |   |
|---------------|---|
| 1878. Mar. 16 | Bradshaw, Henry, M.A., University Librarian,<br><i>Cambridge.</i>                                       |
| 1876. Mar. 16 | Carlyle, Thomas. <i>Chelsea, London.</i>  |
| 1878. Mar. 16 | Curtius, Professor Georg. <i>Leipzig.</i>   |
| 1875. Mar. 16 | Franks, Augustus Wollaston, M.A., F.R.S., F.S.A.<br>103, <i>Victoria-street, London, S.W.</i>           |
| 1880. Mar. 16 | Fick, Professor F. C. August. <i>Göttingen.</i>   |
| 1878. Mar. 16 | Kern, Professor H. <i>Leyden.</i>   |
| 1879. Mar. 16 | Littre, Maximilien Paul Emile. <i>Paris.</i>  |
| 1873. Mar. 15 | Longfellow, Henry Wadsworth. <i>Cambridge, Mass.,<br/>U. S., America.</i>                               |
| 1878. Mar. 16 | Newton, Charles, C.B., D.C.L., F.S.A. <i>British<br/>Museum, London.</i>                                |
| 1873. Mar. 15 | Nigra, His Excellency Cavaliere Constantino, Italian<br>Minister to Russia. <i>St. Petersburg.</i>      |
| 1876. Mar. 16 | Stokes, Margaret. <i>Carrig-Breac, Howth, Co. Dublin.</i>   |
| 1876. Mar. 16 | Stubbs, Rev. William, D.D., Canon of St. Paul's,<br>London, Professor of Modern History. <i>Oxford.</i> |
| 1873. Mar. 15 | Westwood, John Obadiah, Esq., F.S.A., Hope<br>Professor of Zoology. <i>Oxford.</i>                      |
| 1875. Mar. 16 | Whitney, Prof. William Dwight. <i>Yale College,<br/>Connecticut, U.S., America.</i>                     |
| 1876. Mar. 16 | Windisch, Professor Ernst. <i>Leipzig.</i>  |

(One vacancy.)

# S U M M A R Y.

|                           |        |     |     |            |
|---------------------------|--------|-----|-----|------------|
| Life Members              | ...    | ... | ... | 162        |
| Annual Members            | ...    | ... | ... | 175        |
|                           |        |     |     | <u>337</u> |
| Honorary Members (58 + 5) | ...    | ... | ... | 63         |
|                           |        |     |     | <u>400</u> |
|                           | Total, | ... | ... | <u>400</u> |



Should any errors or omissions be found in this List, which is revised to 1st December, 1880, it is requested that notice thereof may be given to the Secretary of the Academy. He should also be informed of the death of any Member.

As this list will be kept standing in type, it can be readily corrected from time to time.







1890



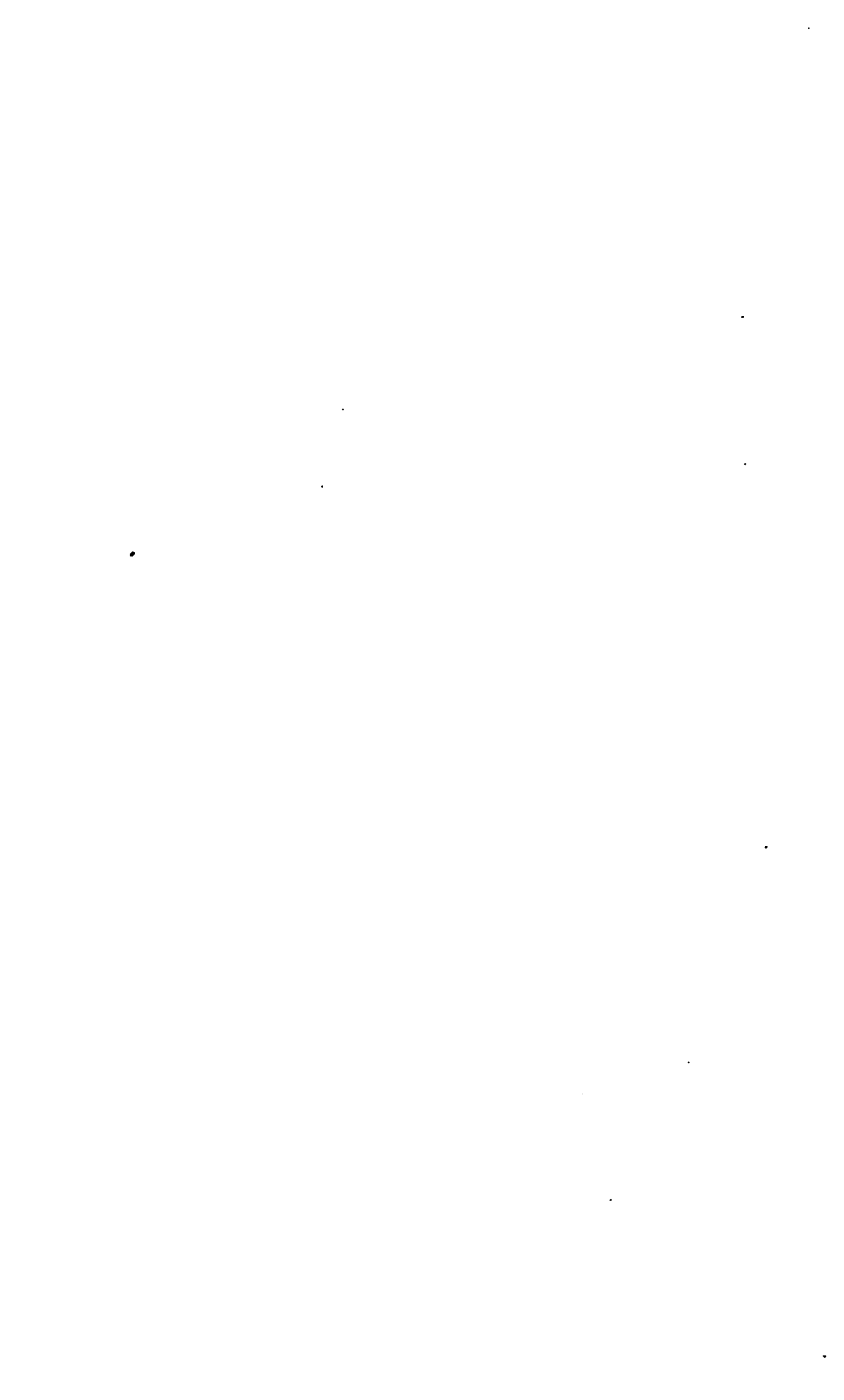


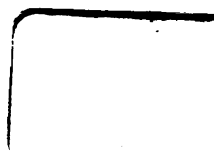


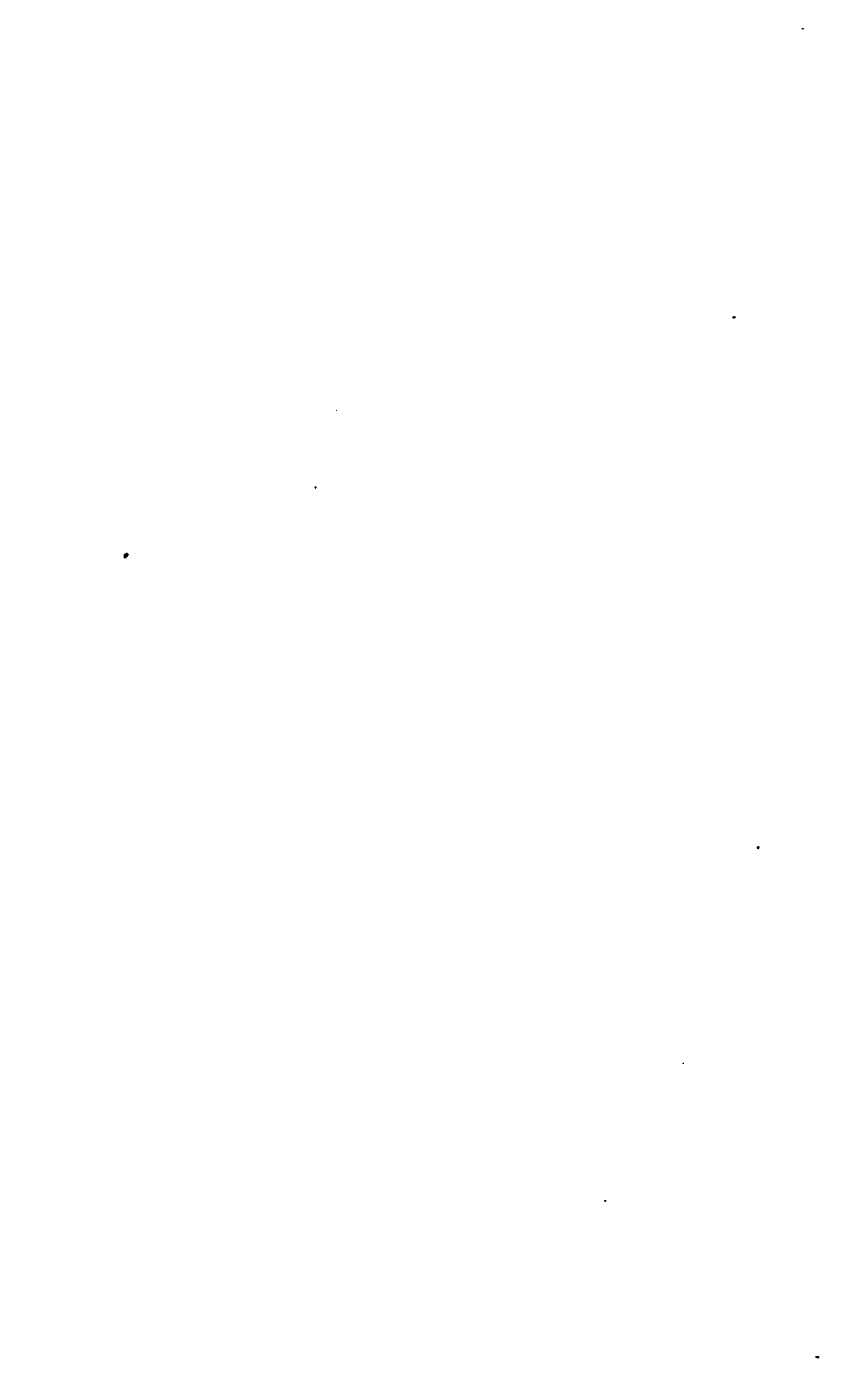

















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